
7.0 Business Results



7.1a Customer Focused Results

7.1a(1) Customer satisfaction and comparisons

Our primary means of evaluating external customer satisfaction is our annual external customer survey below. Our customers rated our efforts on a scale of 1 (low) to 5 (high). Results are in figs. 7.1-1 through -10.

Table 7.1-1. External Customer Survey Questions

How Well Huntsville Center.
1. Seeks your requirements, priorities, and expectations and incorporates them into our service
2. Manages your projects effectively
3. Treats you as an important member of the team
4. Solicits, listens to, and resolves your concerns
5. Provides timely services
6. Delivers quality products and services
7. Delivers products and services at reasonable cost
8. Displays flexibility in responding to your needs
9. Keeps you informed
Rate Huntsville Center's...
10. Project management performance
11. Funds management and cost accounting performance
12. Architect-engineer contracts performance
13. Engineering design quality performance
Rate the following...
14. Huntsville Center would be your choice for future project/services
15. Your overall level of customer satisfaction

We asked five questions in FY99:

		Better	Same	Worse	NA	
16. How do we compare to others who have provided you similar products and services?		50%	24%	3%	21%	
		Quality	Cost	Responsiveness	Other	
17. Why did you select Huntsville Center?	FY 98	20.1%	10.3%	29.4%	40.2%	
	FY 99	24.0%	13.0%	28.0%	35.0%	
		More	Same	Less	None	
18. Will the services you require of us be more, the same, or less in the next 5 years?	FY 98	27.3%	42.4%	26.6%	0.0%	
	FY 99	24.1%	46.7%	27.2%	1.5%	
				Yes	No	
19. Based on your experience with Huntsville Center, would you recommend us to other organizations/agencies?				FY 98	90.6%	9.4%
				FY 99	95.0%	5.0%
				Yes	No	
20. Do you know of other organizations/ agencies that could benefit from our products & services?				FY 98	39.6%	60.4%
				FY 99	34.8%	65.2%

As fig. 7.1-1 shows, our customer satisfaction has improved since FY95. Quality continues to be our highest rated area and cost our lowest. Nine of the fifteen items were the best in the Corps of Engineers. Ratings on five items are higher than ever before. We set survey goals by comparing individual survey questions like those shown in fig. 7.1-4 and through our customer satisfaction index (CSI) shown in fig. 7.1-5.

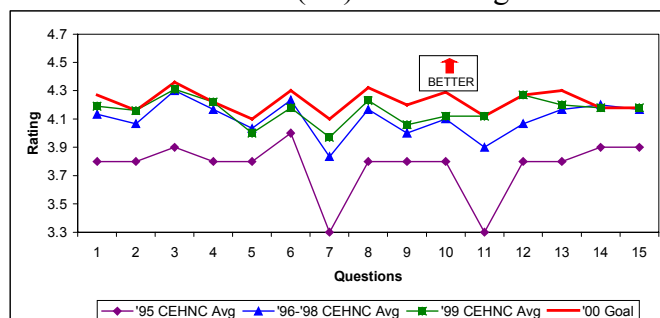


Fig. 7.1-1. External Customer Survey Trend

Fig. 7.1-2 shows satisfaction trends by key requirements: timeliness, quality, cost, overall satisfaction.

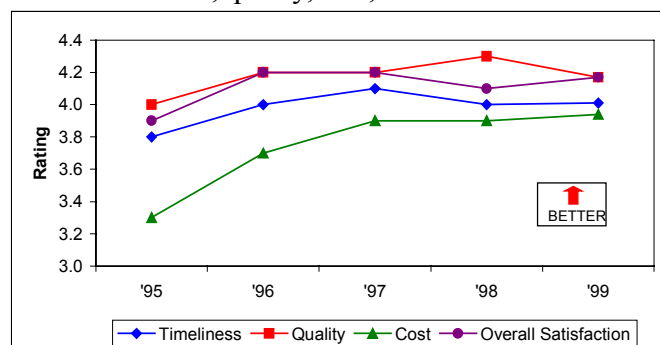


Fig. 7.1-2. Trend By Key Requirements

Fig. 7.1-3 shows external customer survey results compared to the USACE average and overall average of USACE MSC's. Also, 50% of our customers rate us better than that of our competitors (table 7.1-1, #16).

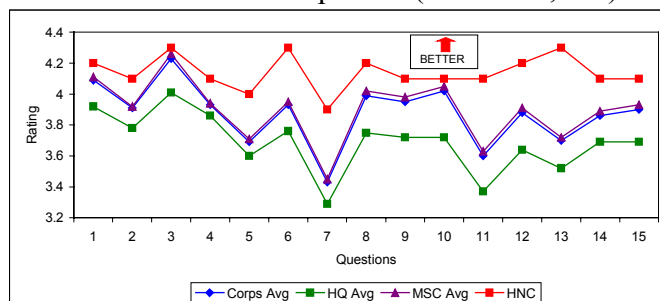


Fig. 7.1-3. Customer Satisfaction Comparison

Fig. 7.1-4 shows that we rate "best in the Corps" on our key success factors of timeliness, cost, and quality. We plot each question to set the survey goals shown in fig. 7.1-1. We strive to be the best in USACE on each question.

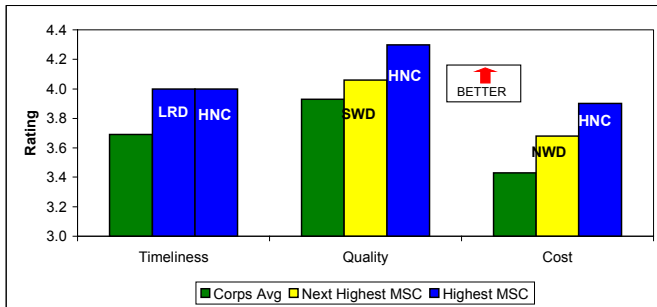


Fig. 7.1-4. HNC Rating on Key Success Factors

Fig. 7.1-5 shows our CSI compared to the average survey scores. The CSI, along with analyses like fig. 7.1-4, helps us set our goals in fig. 7.1-1. Results show that for quality and timeliness we are responding appropriately. Our goal is a cost score of 4.1 to be commensurate with the expectations of our customers.

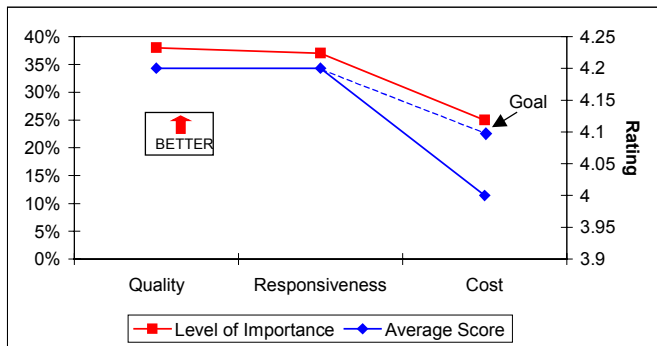


Fig. 7.1-5. Customer Survey Weighting Factors

Fig. 7.1-6 shows satisfaction results segmented by command level as described in table 3.1-1.

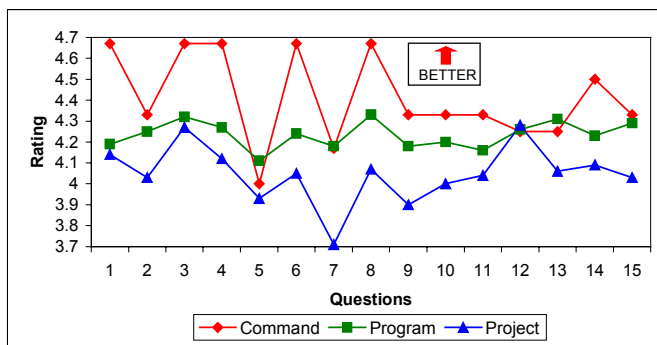


Fig. 7.1-6. External Customer Survey by Levels

Fig. 7.1-7 shows the response rate from our FY95, FY96, FY97, FY98, and FY99 surveys. Excluding the initial survey (FY95) response rate, our response rate has been steady. We update our customer list annually.

Fig. 7.1-8 shows dissatisfied responses for FY95 through FY99. Of the 140 surveys returned by our customers in FY99, 17.9% had at least one negative rating (below 3). Negative responses are given immediate attention (3.2a(3)). We use dissatisfaction data to improve our products, services, and processes.

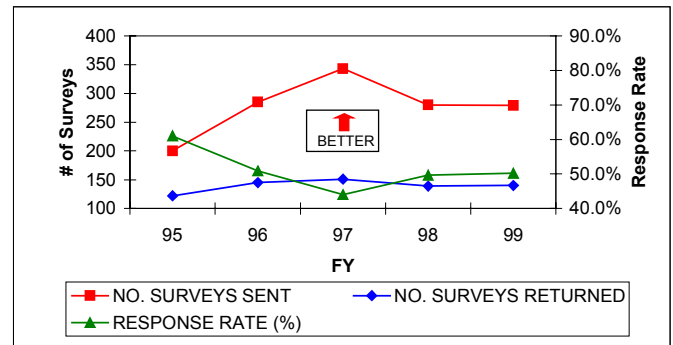


Fig. 7.1-7. External Survey Response Rate

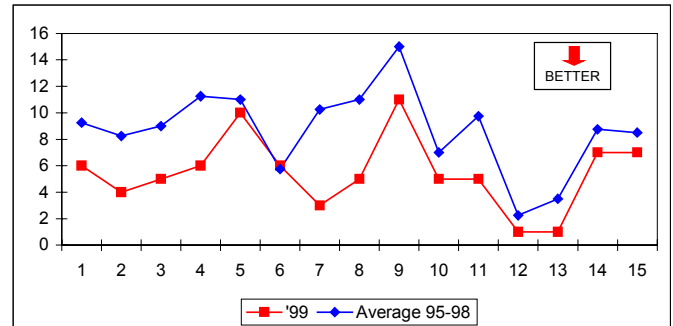


Fig. 7.1-8. HNC Dissatisfied Customer Responses

7.1a(2) Customer loyalty

Fig. 7.1-9 shows HNC's customer retention and new customer percentages.

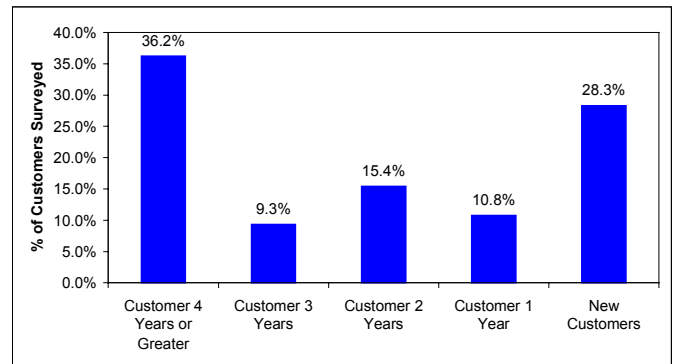


Fig. 7.1-9. Customer Retention Data

Fig. 7.1-10 shows our external customer response to whether we are their future choice for business.

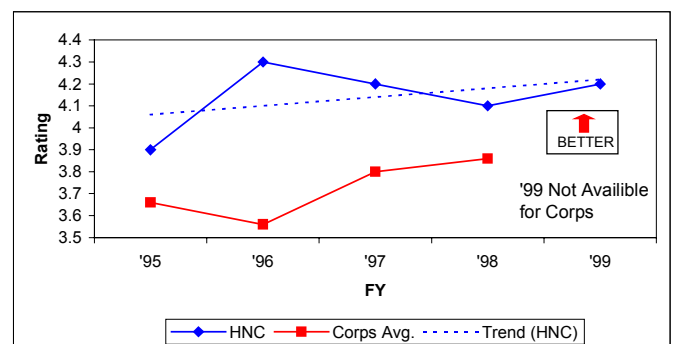


Fig. 7.1-10. Future Choice of Doing Business

7.1a(3) Key product/service performance levels Table 7.1-2 shows key rework data, which is under 1% for each type. This measure of our high quality correlates with customer satisfaction with quality (fig. 7.1-4).

Table 7.1-2. Key Rework Rates

Type	Total Work	Rework	% Rework
Demil	\$1,801,846,083	\$1,431,253	0.08%
BMD	\$8,000,000	\$50,000	0.63%
OE	6,743 grids	63 grids	0.94%

Fig. 7.1-11 shows key satisfaction results from evaluations of products or services with many end users at the time of product or service delivery.

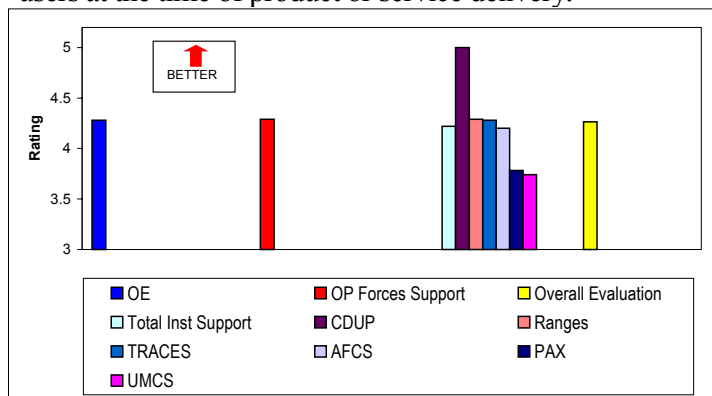


Fig. 7.1-11. Product/Service Performance Evaluation

7.2a Financial and Market Results

7.2a(1) Financial performance

Responding to our customers' concerns about costs (fig. 7.1-1), we changed the way we do business in order to improve our efficiency. Methods used for controlling costs include:

- Setting and reviewing performance, establishing goals, and taking corrective action in our Business Meetings and PRB's (1.1b(1) and table 1.1-1).
- Implementing a team structure (5.1a(1)).
- Educating the work force on cost of doing business.
- Eliminating and reclassifying overhead positions and supervisory levels (fig. 7.3-15).
- Emphasizing chargeability (figs. 7.2-13, -14).
- Ensuring adequate funding early (fig. 7.2-15).
- Establishing a Contracting Directorate (CT) overhead account (fig. 7.5-33).
- Monitoring workload and manpower use (figs. 7.2-6).

As a result, we have increased our efficiency significantly since 1995 as reported in table 7.2-1. This table is the highest level aggregate for corporate performance. These indicators track "efficiency at a glance." Figs. 7.2-1 through -16 are breakdowns of these indicators. Breakdowns are analyzed to the lowest levels and reviewed as explained in 1.1b and table 1.1-1. As explained in 4.1a(1), we use dollars as indicators for a

present and future indicator of financial health, past and future indicator of productivity, present indicator of quality, leading indicator of competitiveness, and leading indicator of customer satisfaction.

Table 7.2-1. Aggregate of HNC Performance

Indicator	FY92-95	B A L D R I G E	FY96-99	Change	FY 99 Only	Change
In-house % of total expenditures	11.3%		7.7%	32%	6.4%	43%
G&A	42%		28%	33%	24%	43%
Engineering TLM	2.8		2.40	14%	2.42%	14%
Workload/FTE (current dollars)	\$735K		\$1064K	45%	\$1356K	84%
TOTAL SAVINGS = \$80.3 Million						

Fig. 7.2-1 shows the savings since we adopted the Baldrige criteria. Those savings total \$80.3M in in-house savings alone, which equals the training budget for a mechanized infantry or armor division. In private industry that amount would equate to profit.

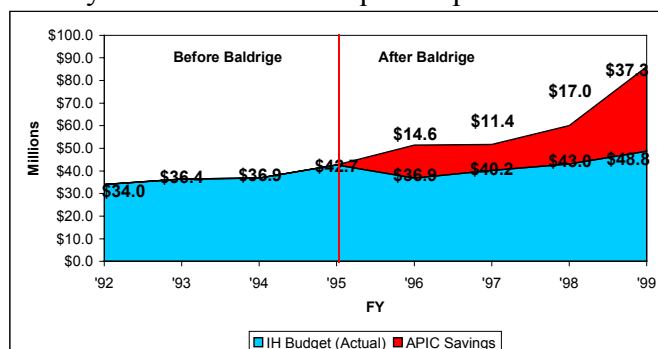


Fig. 7.2-1. Savings in In-House Operations

Fig. 7.2-2 shows the additional in-house cost to our customers if our work were done by similar providers.

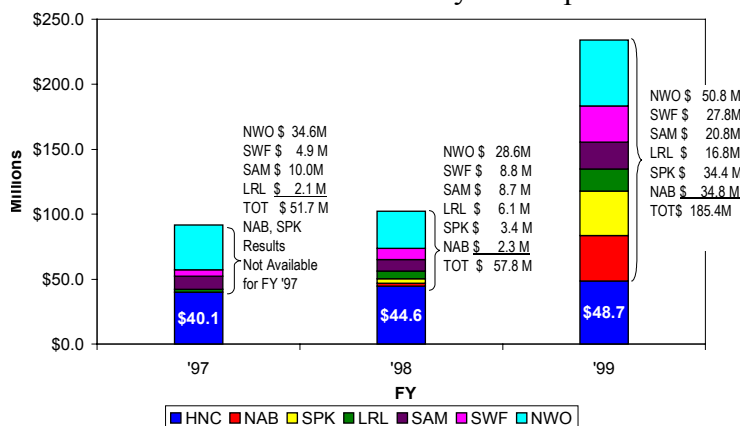


Fig. 7.2-2. Cost Comparison to Other Corps Elements

Fig. 7.2-3 shows expenditures against full-time equivalent (FTE) employees. While workload has grown our work force has remained fairly steady, indicating a rise in productivity.

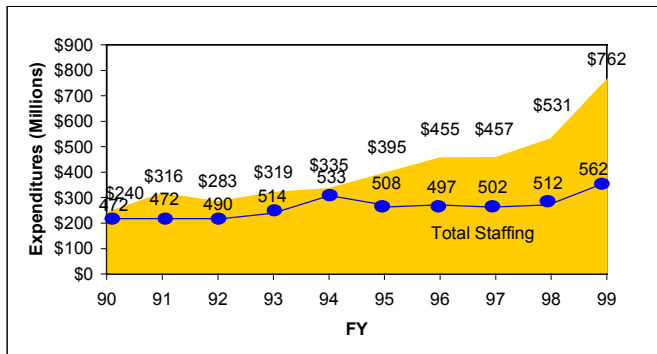


Fig. 7.2-3. Stress Chart

Fig. 7.2-4 shows that the initiatives we began in FY95 have enabled us to execute programs with a much smaller percentage of customers' money. We measure that efficiency as in-house percent of total expenditures. The slight increases in FY97 and FY98 are due to the costs of creating Chem Demil construction resident offices. Fig. 7.2-5 compares our in-house percent of total expenditures to Corps military districts.

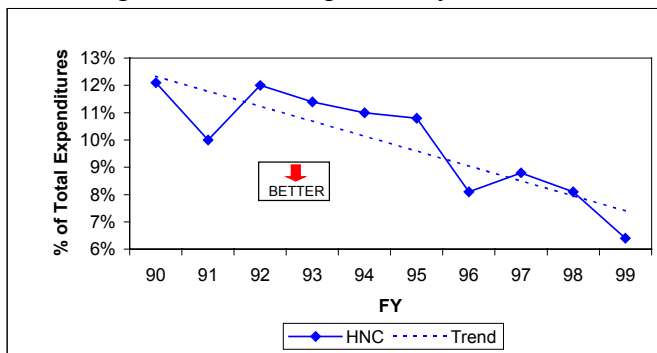


Fig. 7.2-4. In-House % of Total Expenditures

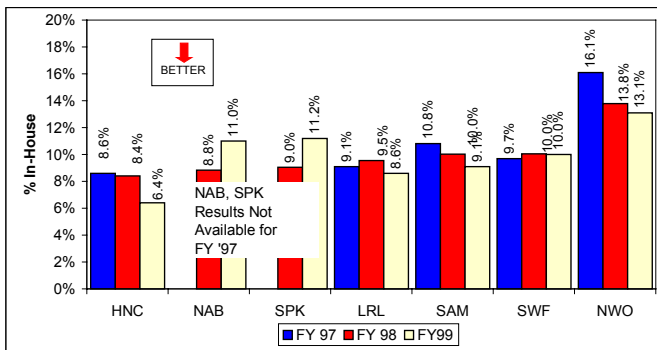


Fig. 7.2-5. In-House % of Total Expenditures Compared

Fig. 7.2-6 shows our workload increasing since 1995. Workload per FTE between FY96-99 was 41% higher than between FY92-95, indicating significant gains in efficiency. Figs. 7.2-7a and b show that we have the highest workload compared to similar providers. We attribute our increased productivity, in part, to our teaming structure and our innovative O&M process.

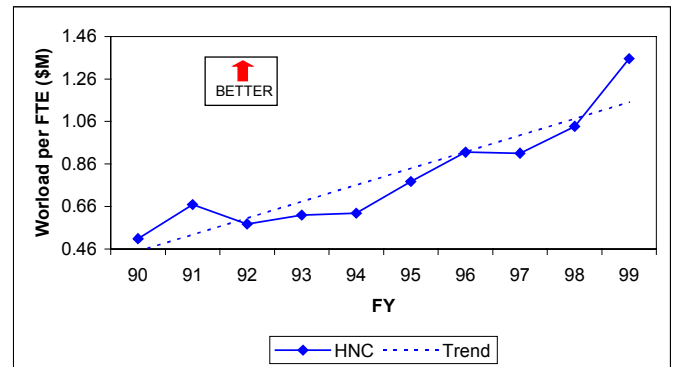


Fig. 7.2-6. Workload per FTE

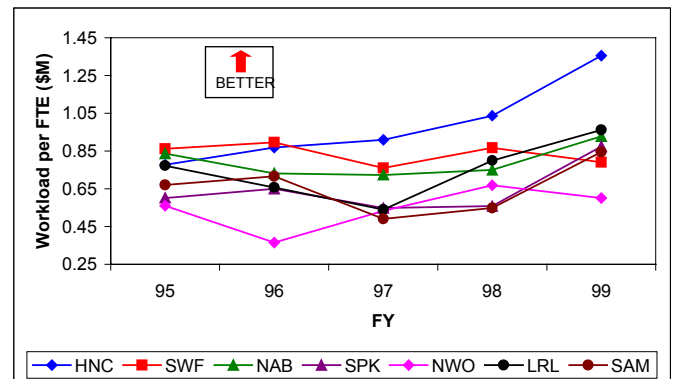


Fig. 7.2-7a. Workload per FTE Trend vs. Districts

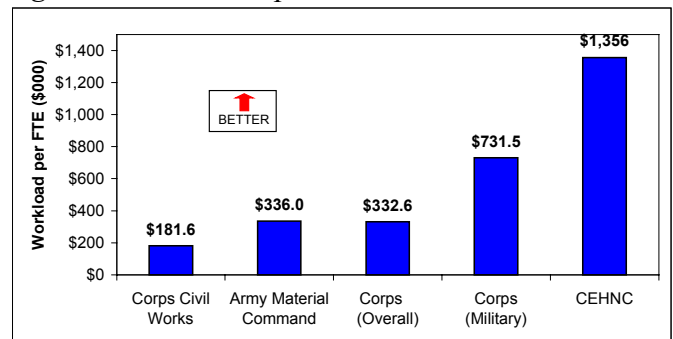


Fig. 7.2-7b. Workload per FTE vs. Similar Providers

Fig. 7.2-8 shows the downward trend in our general and administrative (G&A) overhead rates.

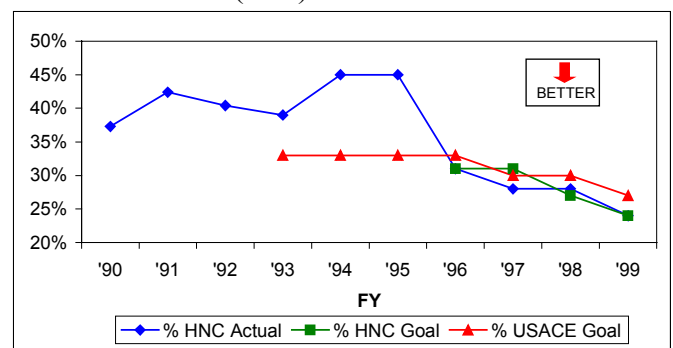


Fig. 7.2-8. HNC G&A Overhead Trend

Total labor multiplier (TLM) is the indirect costs distributed to each direct labor dollar. Because TLM in-

cludes in-house labor, fringe benefits, G&A, departmental overhead, and base rate (fig. 7.2-11), it is one of our key efficiency indicators. The total hourly charge to a customer is calculated by multiplying the TLM by the basic hourly pay rate. Because TLM is an industry standard, we use it to compare our performance to similar providers. Figs. 7.2-9 and -10 show our design and P&PM TLM compared to major Corps military districts. Fig. 7.2-11 shows that since FY95 our engineering TLM dropped 17%, from 2.90 to 2.42, thus decreasing the hourly rate charged to our customers. Fig. 7.2-12 compares our design labor cost per hour compared to major design firms. Our low TLM helps us keep our hourly labor costs down.

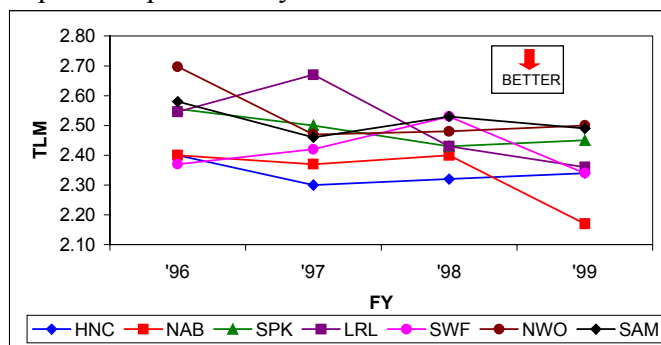


Fig. 7.2-9. HNC Design TLM vs. Districts

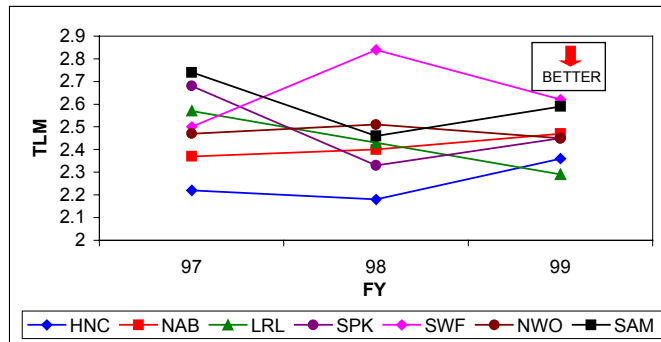


Fig. 7.2-10. HNC P&PM TLM vs. Districts

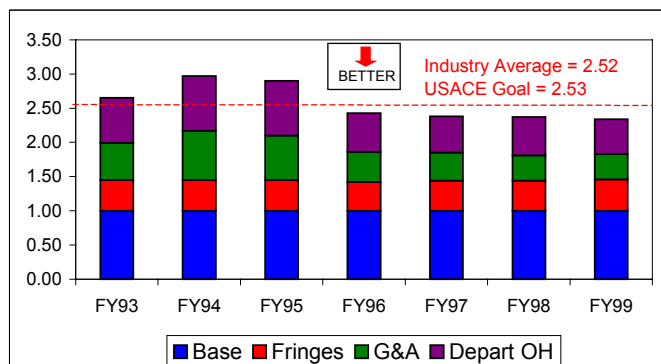


Fig. 7.2-11. HNC Engineering TLM vs. Industry

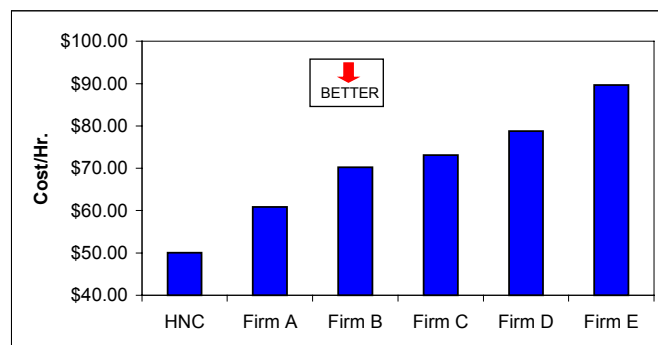


Fig. 7.2-12. Design Labor Cost Per Hour Compared
Design chargeability, the rate at which we charge directly to project accounts, is linked to controlling overhead rates. Fig. 7.2-13 shows that since FY95, our rate has been consistently higher than the industry average. Fig. 7.2-13 shows that our chargeability improved from 58% in FY94 to 67% in FY99. Fig. 7.2-14 shows that we have the highest chargeability rate of key Corps military districts. We attribute our improved rates to our emphasis on obtaining project funds early in the fiscal year, thereby reducing charges to overhead and increasing direct charges by earlier work start dates as shown in fig. 7.2-15. By receiving our funds early, we can distribute work evenly across the fiscal year. That is one way we increase our efficiency.

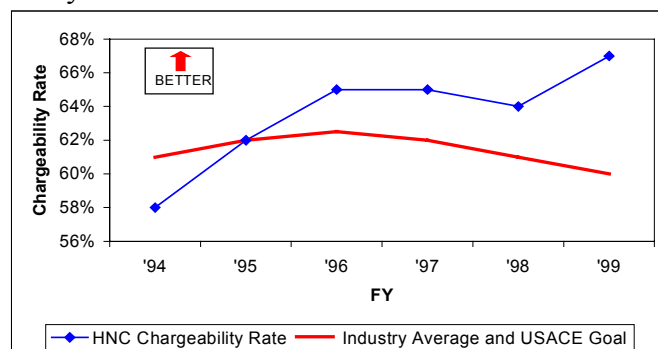


Fig. 7.2-13. Design Chargeability Rate

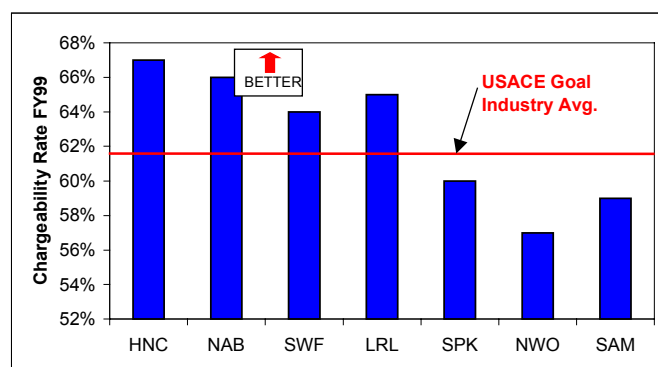


Fig. 7.2-14. Design Chargeability Comparison

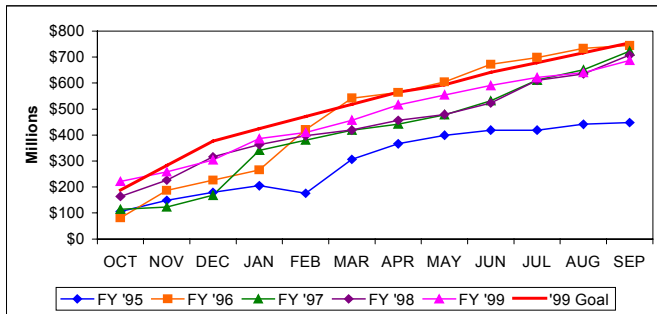


Fig. 7.2-15. Funds Received (Cumulative)

Fig. 7.2-16 shows our month-by-month expenditures since FY94. The smoother the slope, the more even the work distribution, a factor that adds to our efficiency and high chargeability.

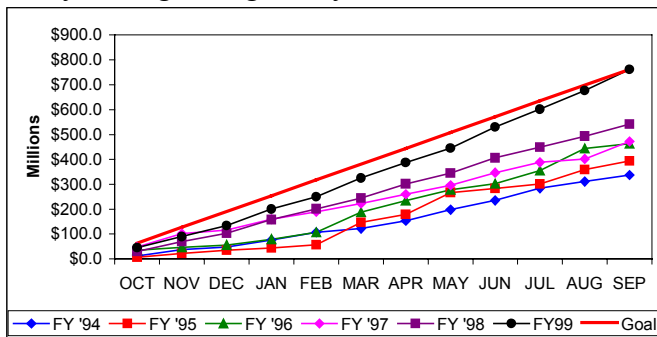


Fig. 7.2-16. Expenditures Trend

7.2a(2) Marketplace performance Since we are a reimbursable organization, our funding source is a customer base that is free to look elsewhere for products and services. Fig. 7.2-17 shows the ebb and flow of that base over time. Fig. 3 in the Overview shows our growth in responsibility. Throughout our history, in those areas which we are permitted to market (3.1a(1)), we maintain market share through our ability to offer customers more for their money, quality technical expertise, and responsive cycle time through innovative contracting processes.

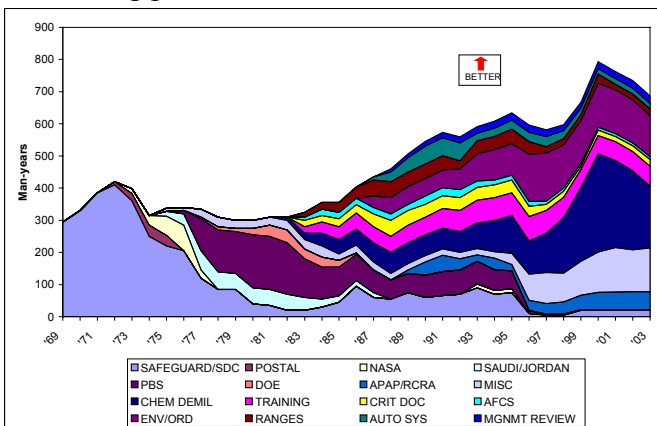


Fig. 7.2-17. Market Growth

Fig. 7.2-18 shows the growth trend for Chem Demil, OE, and Installation Support product lines. The large projected increase for Chem Demil is due to construction starts at three new sites. Because of the FY01 Chem Demil downturn identified during strategic planning, we are preparing a proposal for the two follow-on plants. The increase in Installation Support is due to the transfer of the Center for Public Works (CPW) mission (table 3.1-3). OE workload is projected to remain steady as we substitute advanced technology for our current processes. We also plan to migrate the less sophisticated and less dangerous work to Corps districts. In table 7.1-1, question 18, our customers indicated that 72.7% of our services would increase or remain the same over the next five years.

Fig. 7.2-19 shows our Medical and BMD growth trends since 1992.

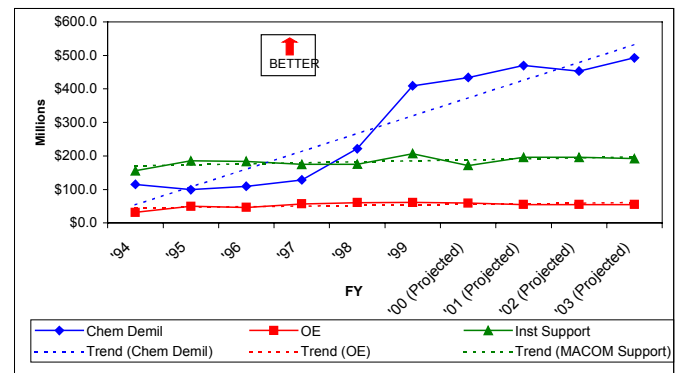


Fig. 7.2-18. Chem Demil, Installation Support, and OE Growth Trends

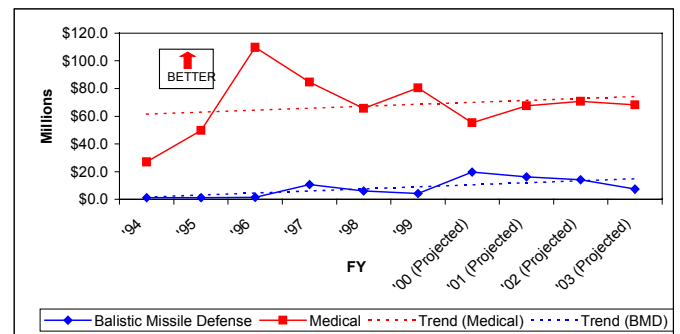


Fig. 7.2-19. BMD and Medical Growth Trends

Results for our operations plan action plans developed during strategic planning are reported in table 2.2-1, column 4, *Status*, and are measured for success as reported in table 4.1-1, Key Success Factors.

7.3a Human Resource Results

7.3a(1) Employee well-being, satisfaction, dissatisfaction and development Fig. 7.3-1 shows the comparison of our climate surveys conducted in FY95, FY97, and FY98. We attribute higher scores to improvements

in our quality structure. Results show that 17 of the 20 categories set new highs with no new lows.

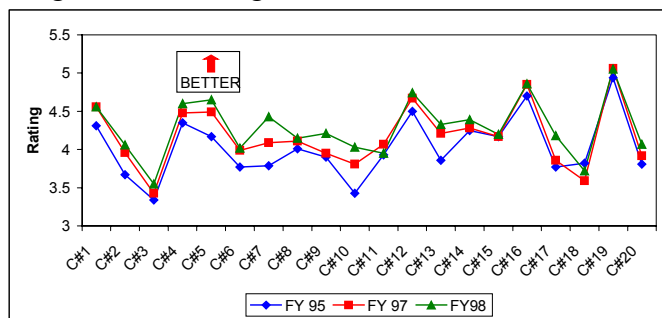


Fig. 7.3-1. Climate Survey

Fig. 7.3-2 shows climate survey results for each internal organization. Major changes were instituted in the lowest rated organizations as explained in 5.3c.

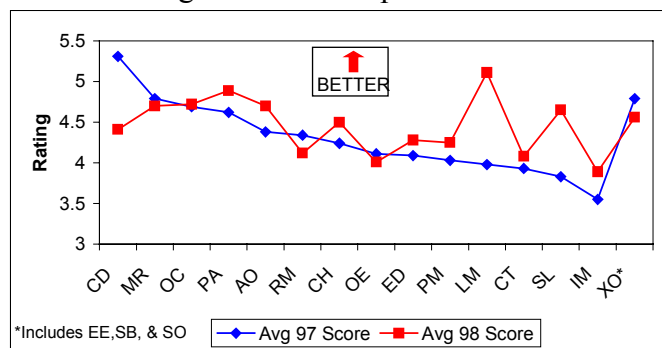


Fig. 7.3-2. Climate Survey By Organization

Fig. 7.3-3 shows an upward trend in sick leave usage, which we attribute to several seriously ill employees last year, the implementation of the Federal Employee Retirement System (FERS), and the implementation of the Family Leave Act. Also shown is the FY97, FY98, and FY99 sick leave rate with the family leave and extended sick leave removed. We attribute the FY99 downturn to counseling and implementing flexiplace.

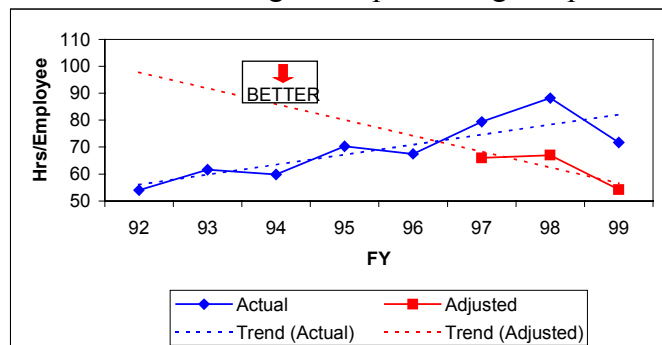


Fig. 7.3-3. Sick Leave Usage Rate

As shown in fig. 7.3-4, membership in our Health and Wellness Program has increased steadily each year since the LIFE Center opened. In November 1996, we started a Health Augmentation Program in an effort to increase LIFE Center use as explained in 5.3a.

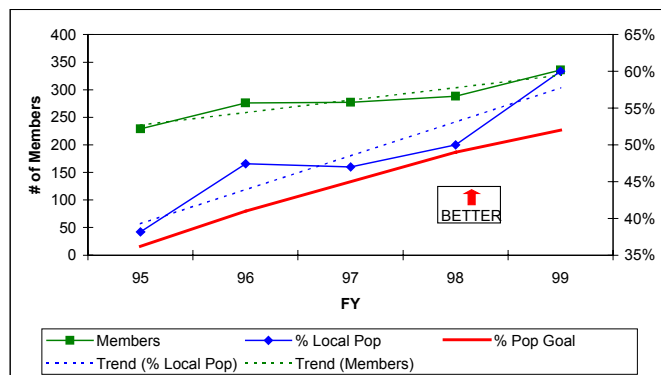


Fig. 7.3-4. LIFE Center Membership Trend

Fig. 7.3-5 shows that LIFE Center users had a lower sick leave usage than those not using the facility.

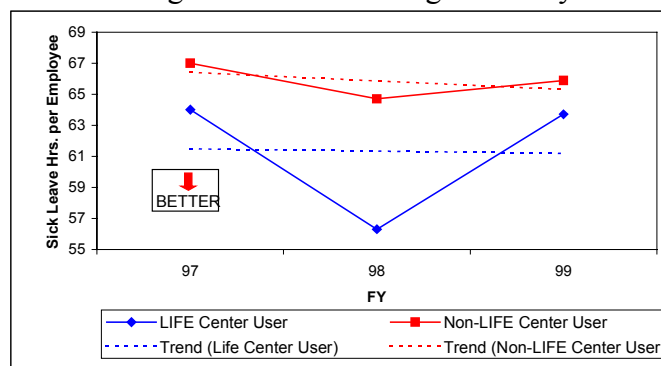


Fig. 7.3-5. Sick leave for LIFE Center Users

Fig. 7.3-6 shows EEO case resolution compared with major USACE organizations. Fig. 7.3-7 shows the case brought forward per FY (both formal and informal).

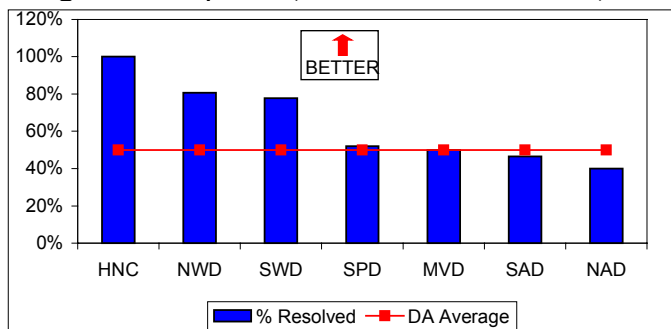


Fig. 7.3-6. EEO Case Resolution Comparison

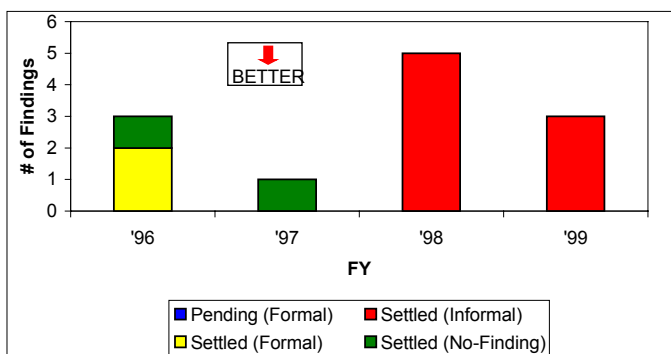


Fig. 7.3-7. EEO Case Resolution

Fig. 7.3-8 shows a negative trend in female personnel caused by two factors: (1) rise in construction hiring (a male-dominated field) and (2) loss of female personnel by HR and RM centralization. Fig. 7.3-9 shows a positive trend in minority representation. Table 2.1-1, team 14, shows action for improving minority hiring.

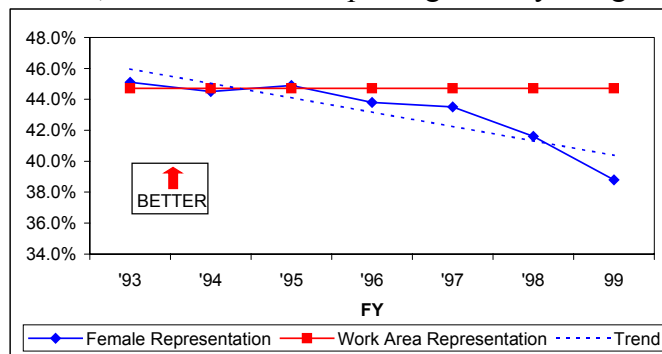


Fig. 7.3-8. Female Representation

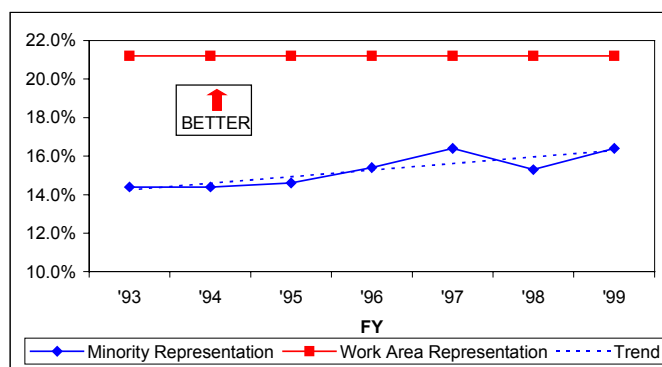


Fig. 7.3-9. Minority Representation

Fig. 7.3-10 shows a comparison of the percent of change in affirmative action hiring for minorities and women for grades 13 through 15.

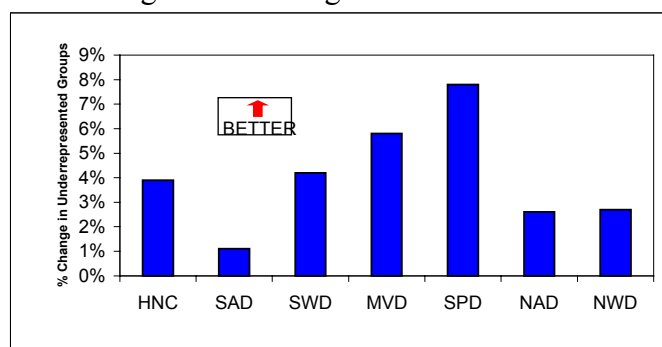


Fig. 7.3-10. Affirmative Action Progress Compared

Fig. 7.3-11 shows that our internal safety record as measured in lost-time accident rate is better than the Corps-wide and Army rate. The Corps of Engineers maintains the best safety record in the industry. The lost-time frequency rate measures the rate of time lost from accidents per 100 man-years.

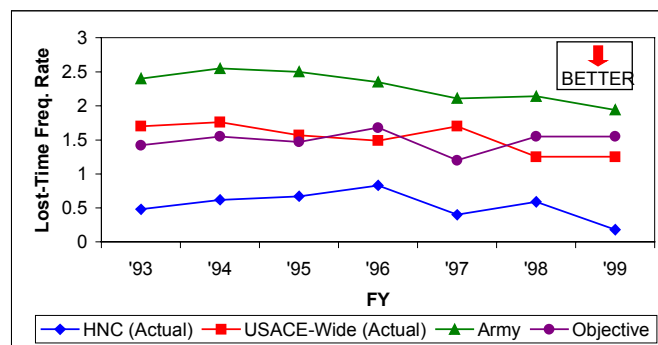


Fig. 7.3-11. Lost-Time Frequency Rate

Fig. 7.3-12 shows the number of employees certified by our Administrative Support Group (ASG) Program by level. ASG certification, described in 5.2a(7) is a key measure for competency of our administrative support staff. Loss of ASG-certified personnel is attributed to promotions to other organizations, indication that certification is a competitive advantage.

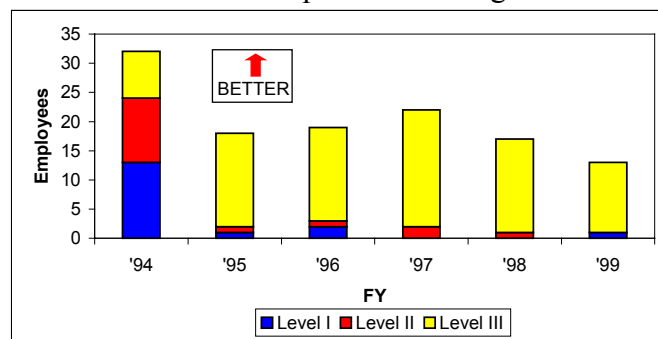


Fig. 7.3-12. ASG Certification

The 1991 Defense Acquisition Workforce Improvement Act (DAWIA) established certification-training requirements for our acquisition work force. Fig. 7.3-13 shows that 89% of our current eligible work force is fully certified by close of FY99.

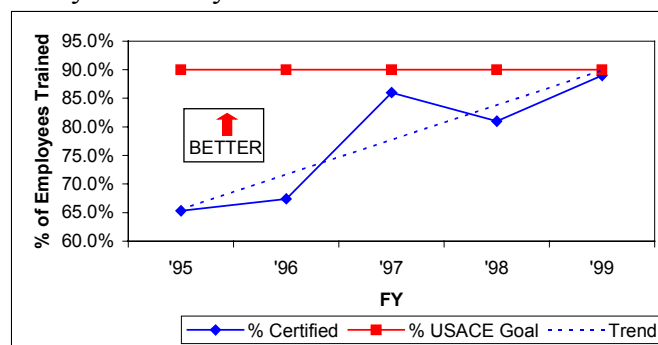


Fig. 7.3-13. DAWIA Certification

Fig. 7.3-14 shows our professional registration trending upward in all categories. This offers our customers a high level of technical expertise to deliver quality products.

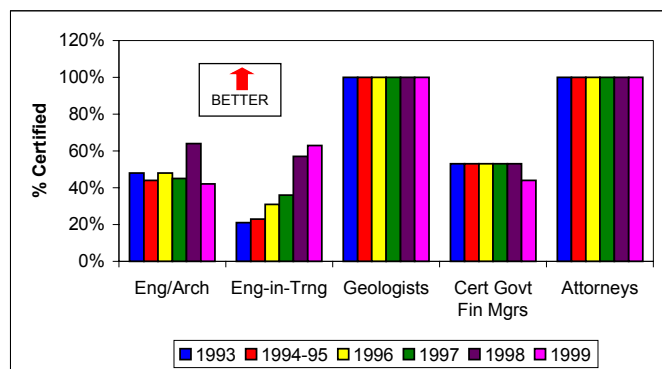


Fig. 7.3-14. Professional Registration

7.3a(2) Work system performance and effectiveness

Our work system is explained in 5.1a(1). Through our work system, we reduce boundaries, maintain cost effectiveness, and adapt to a changing environment. We track work system effectiveness through the correlations listed in table 7.3-1. All indicators show improved efficiency and customer satisfaction since we realigned and adopted our team-based structure.

Table 7.3-1. Work system effectiveness correlations

Metric	Fig. Reference	Correlation Trend
Overall Customer Satisfaction & Loyalty	7.1-1, -2, -9, -10; 7.2-17, -18, -19	Improved
Productivity	7.2-3, -4, -5, -6, -7a, -7b; table 7.2-1	Improved
Flexibility/Responsiveness	7.1-1 #8; 7.1-2	Improved
Cost	7.1-1 #7; 7.1-2, -3; 7.2-1, -2, -8, -9, 10, -11, -12, -13	Improved
Quality	7.1-1 #'s 6 & 13; 7.1-2, -4; 7.5-50	Improved
Cycle Time	7.5-1, -3, -36, -37, -47	Improved
Innovation	Table 7.5-1 outside awards	Improved

Fig. 7.3-15 shows our supervisor ratio trend. Our FY99 supervisor ratio is based on our current approved staffing plan and exceeds the Department of Army goal because of a hiring lag, which will correct itself with full staffing.

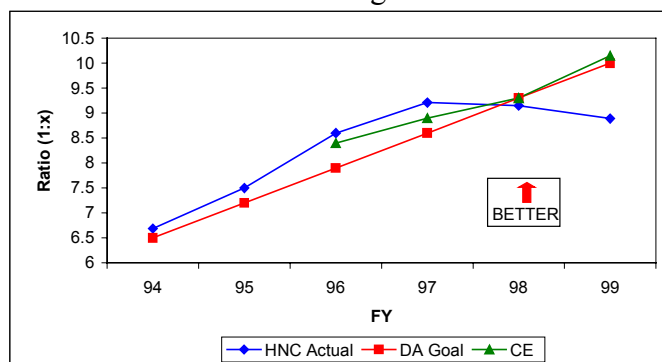


Fig. 7.3-15 Employee-Supervisor Ratio

Figs. 7.3-16, -17, -18 and -19 show our 360 rating summaries. We use 360 to target training, leadership, and other improvement areas items 1.1a(1), 5.1a(3)).

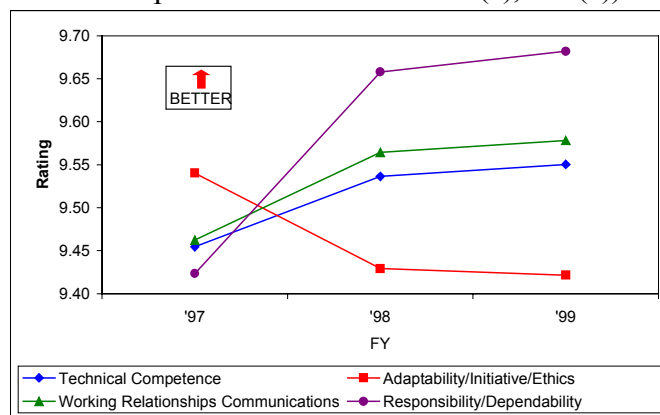


Fig. 7.3-16. 360's for GS-08's and below

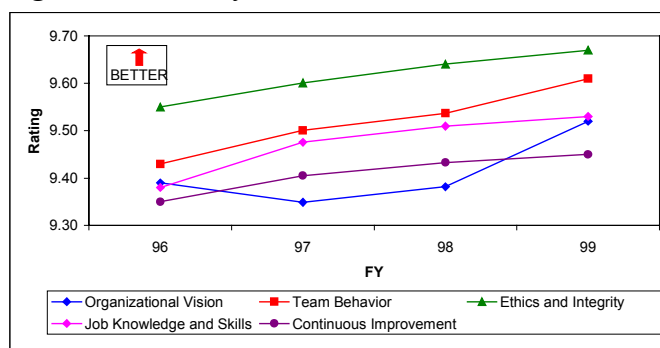


Fig. 7.3-17. 360's for GS-09 through -12's

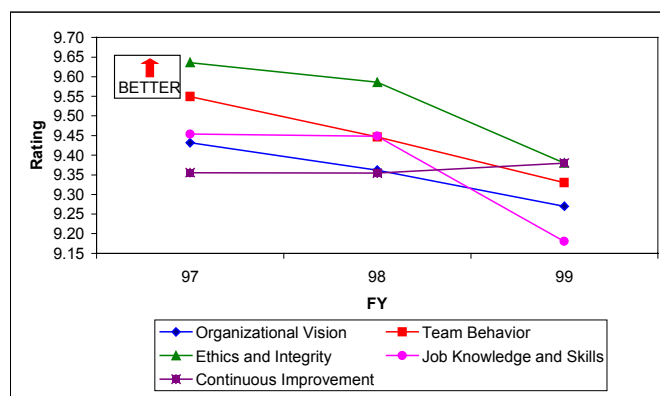


Fig. 7.3-18. 360's for GS-13's and Up, Non-supervisory

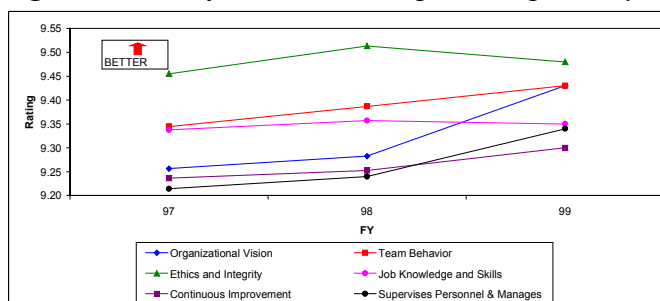


Fig. 7.3-19. 360's for GS-13's and Above, Supervisory

7.4a Supplier and partner results Our major suppliers and partners are listed in table 1 and discussed in paragraph 9 of the Overview. We manage them through the processes outlined in 6.3 and in fig. 6.3-1. Fig. 7.4-1 shows that our major contracting firms have TLM's that are at or near the industry average.

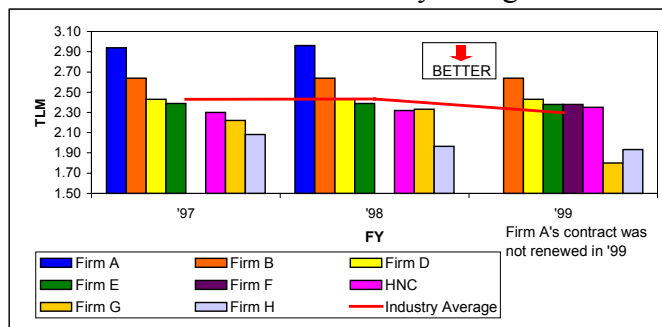


Fig. 7.4-1. Supplier TLM Results

Fig. 7.4-2 shows the results of our Simplified Acquisition supplier rating system for purchases under \$100K—an improvement initiated by our gap analysis.

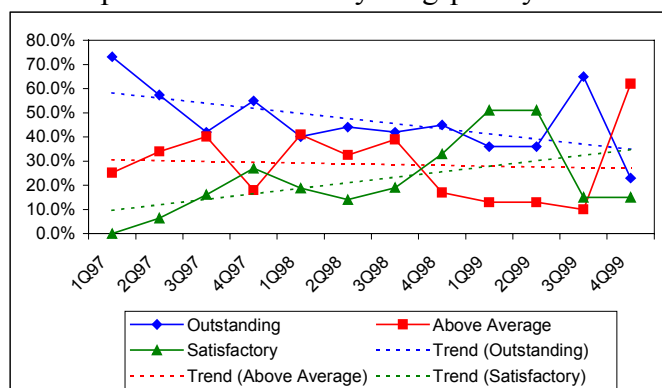


Fig. 7.4-2. Supplier Rating Results

Fig. 7.4-3 shows results for SSCASS (table 4.1-2), an evaluation system for service contracts over \$100K, implemented in the second quarter of FY97.

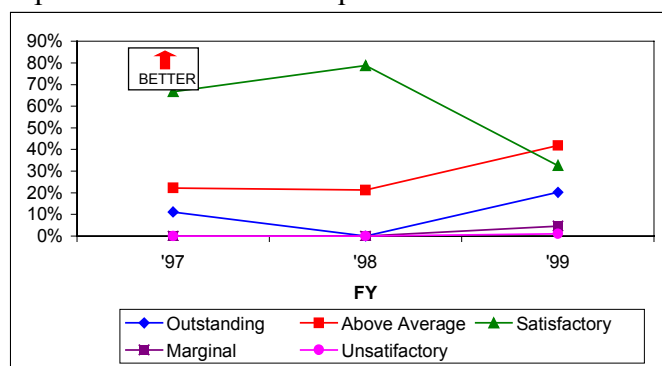


Fig. 7.4-3. FY97 through FY99 SSCASS Rating

We ask our customers to evaluate our A-E contractors' performance on our external customer survey. Fig. 7.4-4 shows a marked improvement. Figs. 7.4-5 and -6 show the same improvement.

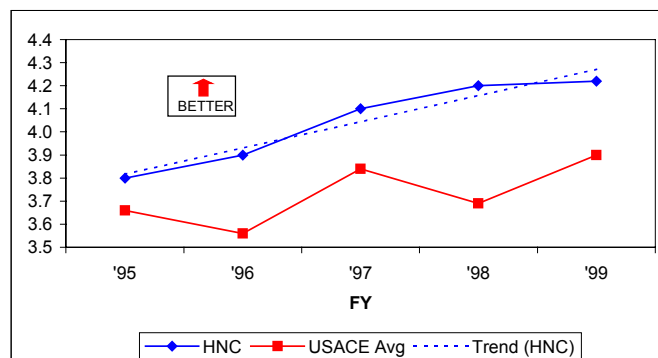


Fig. 7.4-4. A-E Contractor External Customer Survey Performance—Trend and Comparison

The performance ratings of our A-E contractors are maintained in ACASS, an automated database (table 4.1-2). Figs. 7.4-5 and 7.4-6 show our A-E supplier performance ratings since FY91.

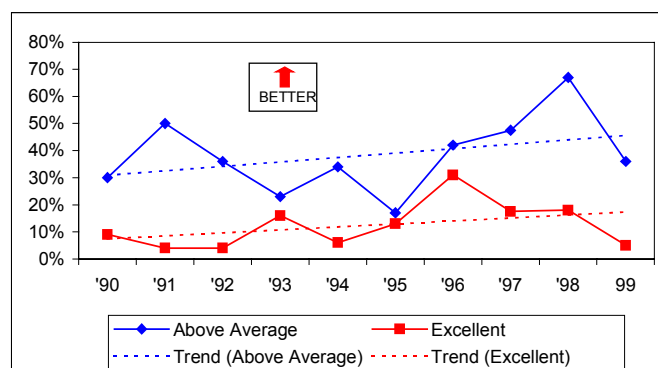


Fig. 7.4-5. A-E Contractor Performance (Excellent & Above Average)

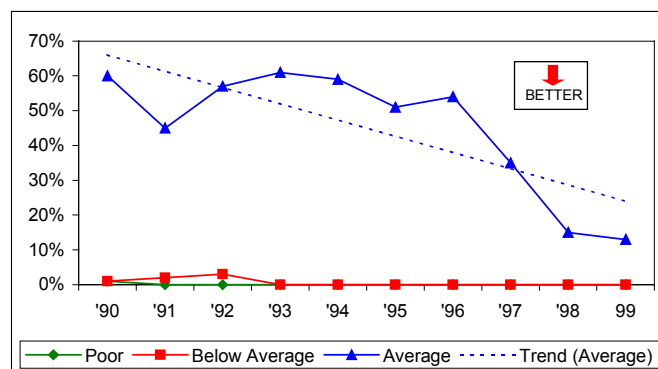


Fig. 7.4-6. A-E Contractor Performance (Average, Below Average, & Poor)

Figs. 7.4-7, -8, and -9 show early-late start charts for construction at Umatilla, Anniston, and Pine Bluff—the Chem Demil sites currently under construction. We use this chart to track the rate of placement against the earliest and the latest start times. If the green line falls below the red line, the construction schedule and budget are at risk.

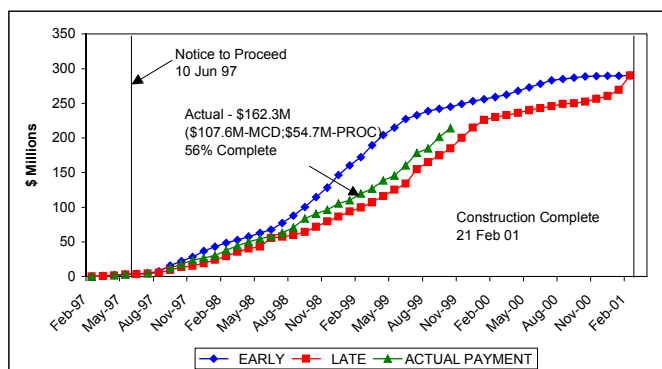


Fig. 7.4-7. Umatilla Early-Late Start Chart

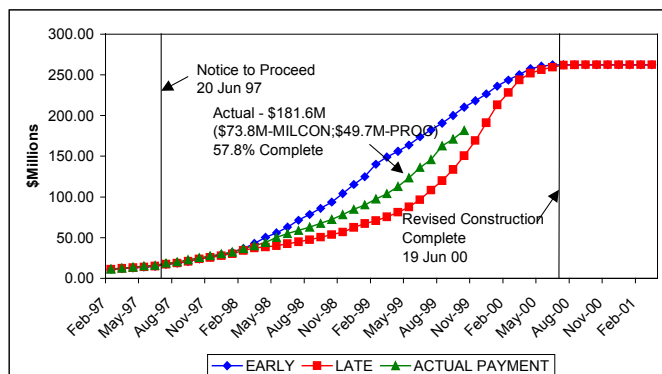


Fig. 7.4-8. Anniston Early-Late Start Chart

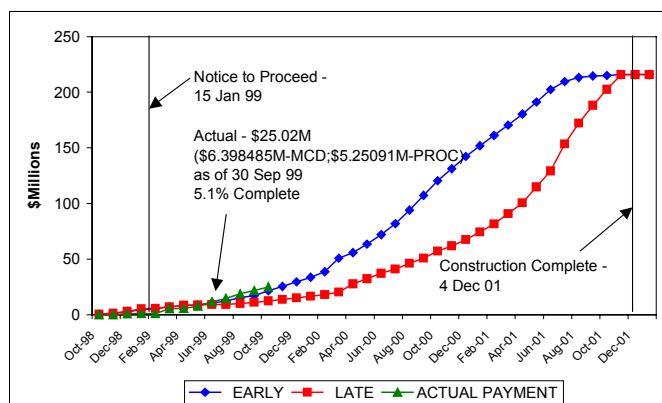


Fig. 7.4-9. Pine Bluff Early-Late Start Chart

Figs. 7.4-10 and 7.4-11 show the cumulative MILCON cost growth for the Umatilla and Anniston Chem Demil sites. The goal is not to exceed the programmed amounts of \$171.2 and \$137.9 million, respectively. The bottom dollar figures are the award amounts.

Fig. 7.4-12 shows that we track time growth for our Chem Demil sites as controllable, user-requested, and weather related. Pine Bluff and Umatilla have had zero time growth, and Anniston has had a 0.41% increase in schedule because of weather.

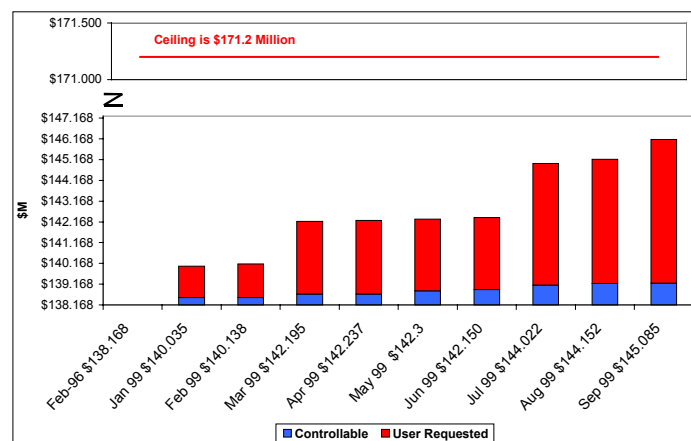


Fig. 7.4-10. Cost Growth for Umatilla

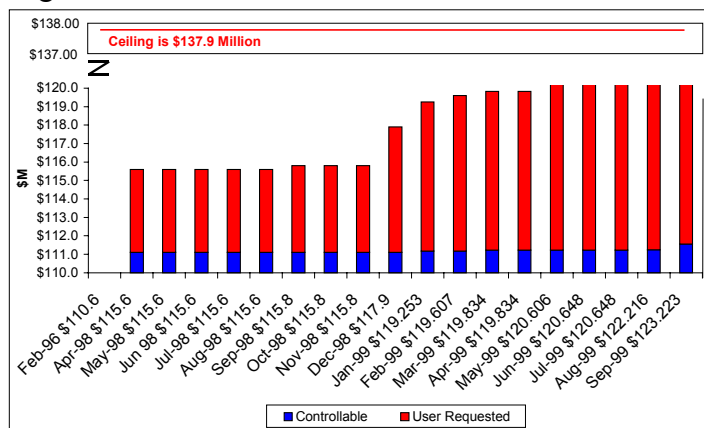


Fig. 7.4-11. Cost Growth for Anniston

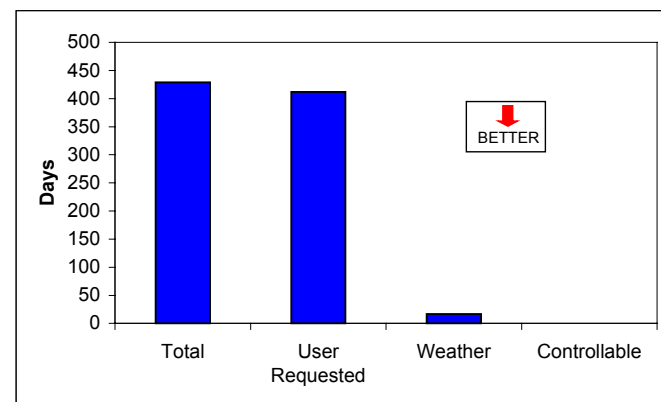


Fig. 7.4-12. Time Growth for Chem Demil

Fig. 7.4-13 shows that the cost of our Energy and Medical contractors performing the work in the field on our innovative O&M process is essentially the same as the traditional invitation for bid (IFB). Thus, we get the same cost and quality from our suppliers through our streamlined process that we would get if we used the traditional process. However, our innovative process produces in-house cost and time savings as shown in figs. 7.5-1, -2, -4, and -6.

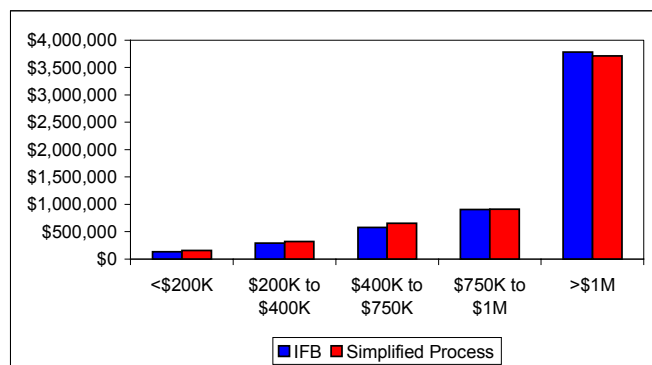


Fig. 7.4-13. Comparison of Construction Cost IFB vs. Simplified Process

Fig. 7.4-14 shows the comparison and trend for contractor lost workday rate. The Corps of Engineers maintains the best safety record in the industry. We are able to achieve a strong safety record through the methods summarized in table 5.3-1.

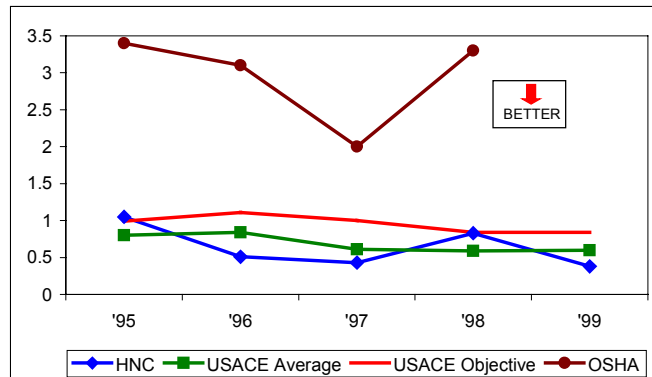


Fig. 7.4-14. Supplier Safety Data

Civilian Personnel Operations Center (CPOC) and Civilian Personnel Advisory Center (CPAC) supply our personnel recruitment actions. The assumed responsibilities from our internal HR Office in third quarter FY97. Fig. 7.4-15 shows the average time to process a SF52 action since FY94. We negotiated a servicing agreement with them to improve their response time.

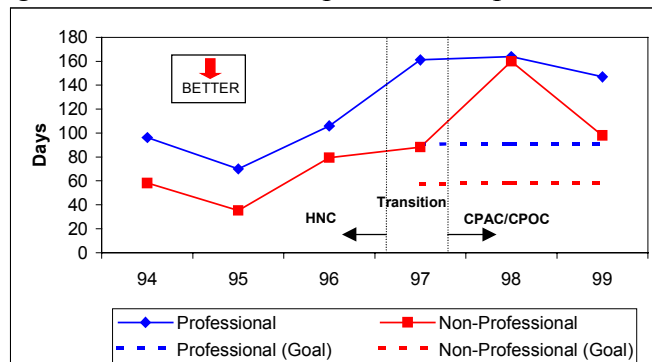


Fig. 7.4-15. Average Time to Process SF52 Actions

Fig. 7.4-16 shows the award fee for our Russian Demil contractor, based on cost, schedule, quality, and

customer satisfaction metrics in the contract. It is contractor profit and a quality measure. An evaluation board including the customer determines the award.

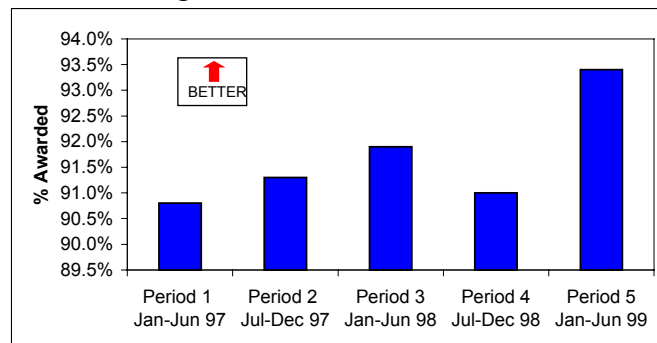


Fig. 7.4-16. Russian Demil Contract—Average Award Fee Board Rating

7.5a Organizational Effectiveness Results

7.5a(1) Key delivery, design, production, and support process levels and trends As shown in fig. 6.1-3, our four key processes are programs and process management (P&PM), contract management (CT), engineering and technical services (ED), and construction management. Besides monitoring those processes individually, we also track performance as they are integrated, executed, and managed through our integrated process teams (IPT's). Figs. 7.5-1 thru 7.5-10 show key IPT measures.

Our Medical IPT has reduced cycle time to meet our customer's requirements. Fig. 7.5-1 shows that our innovative O&M process is three times faster for simple requirements and two times faster for minor engineering efforts. Ninety percent of the projects in this program fall into those two categories.

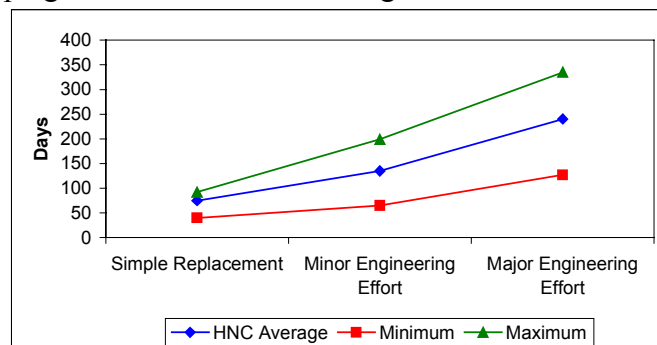


Fig. 7.5-1. Medical O&M Cycle-time Comparison

Fig. 7.5-2 shows that through our innovative O&M process, administrative costs are much less than for traditional methods, providing customers a lower total cost. Overall, the cost of a work plan (design) and the administration of a project from inception to closeout is 11.3% of program amount (PA) versus the traditional 30%. We have saved our Medical customers \$27.6M on 333 projects.

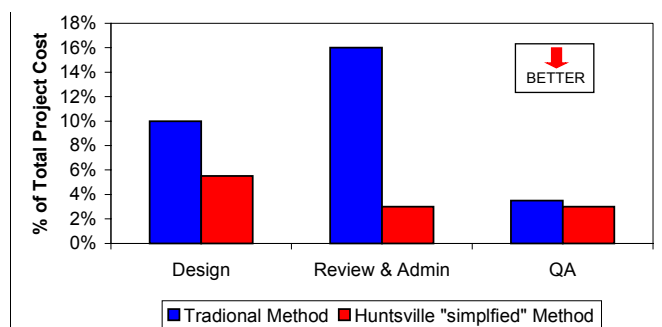


Fig. 7.5-2. Medical O&M Process Comparison

Fig. 7.5-3 shows that our Energy IPT O&M process provides services 200 days faster than the traditional method, increasing our energy customers from 4 in FY94 to 6 in FY95 to 7 in FY96 to 9 in FY97 to 14 in FY98 to 23 in FY99. (Same process as for Medical.)

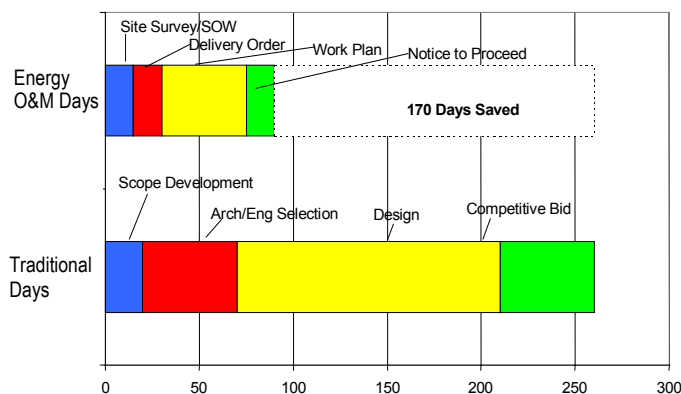


Fig. 7.5-3 Energy O&M Process Cycle-time Reduction

Fig. 7.5-4 shows Energy IPT savings through our innovative O&M process. Our Energy IPT has saved nearly \$30M for 265 projects from FY92-FY99.

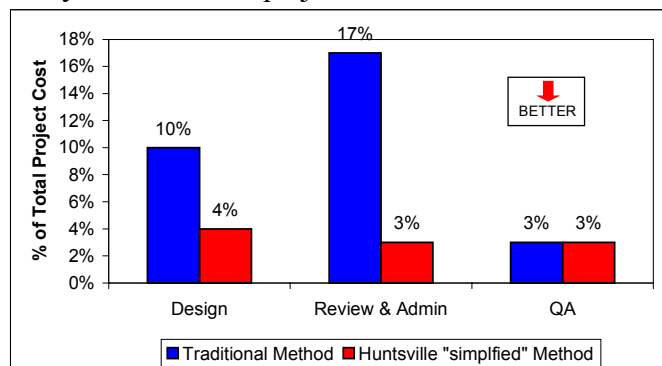


Fig. 7.5-4. Energy O&M Process Cost Comparison

Fig. 7.5-5 shows that our Energy IPT reduced contract award cost from \$140K to \$20K and time from 24 to 6 months for Energy Savings Performance Contracts (ESPC's). The FY92-94 contracts were single solicitations for single contracts with detailed technologies and scopes of work. The FY95-96 contracts were single solicitations for single requirements (no scopes of

work). The FY97-FY99 contracts were single solicitations for multiple ID/IQ contracts (no scopes of work).

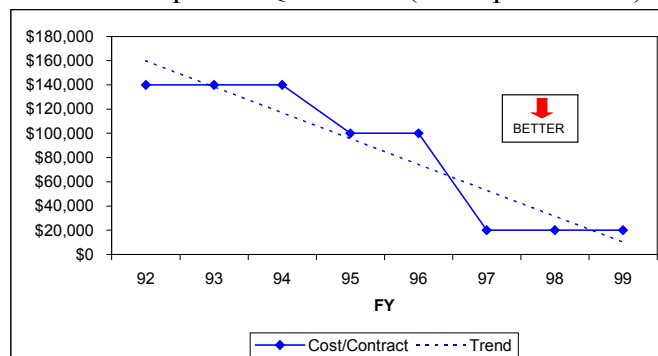


Fig. 7.5-5. ESPC cost reduction

Our Unaccompanied Personnel Housing (UPH) IPT acquires cots, bunks, lockers, etc., for soldiers. Fig. 7.5-6 shows savings to customers over previous budgets, thereby providing more furnishings for troops.

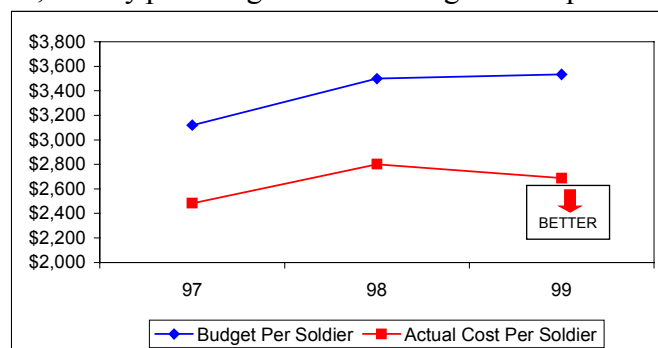


Fig. 7.5-6. UPH Savings

Fig. 7.5-7 shows the TRACES IPT hotline support.

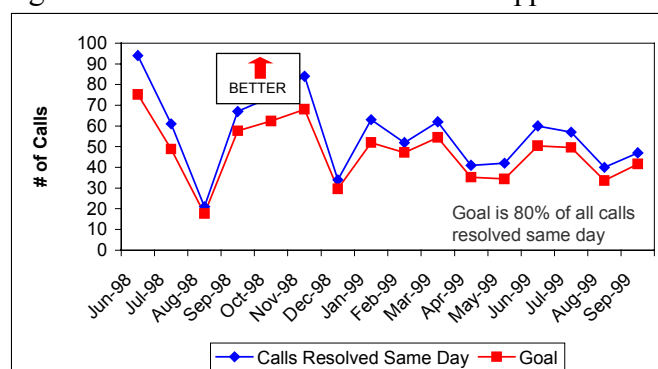


Fig. 7.5-7. TRACES Hotline Support

Fig. 7.5-8 shows the cost per acre of OE IPT's engineering evaluation/cost analysis (EE/CA) process. Fig. 7.5-9 shows the cost per acre of OE removals. Data are used to determine when to apply the EE/CA process. For example, for a small site, we can use the cost per acre for a site with a similar history and characteristics to compare the cost of a removal versus the cost of a full EE/CA. In that way, we reduce costs without sacrificing quality or safety.

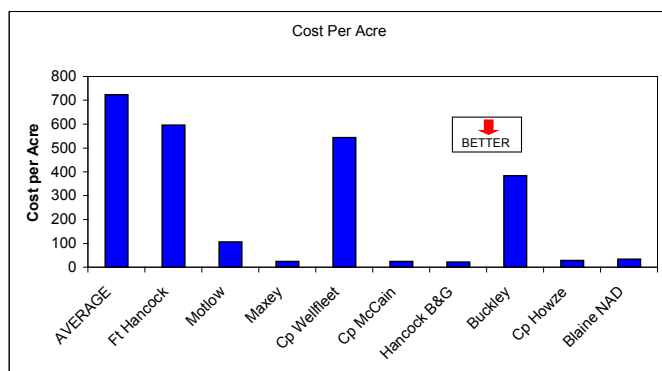


Fig. 7.5-8. Cost Per Acre for EE/CA's on OE sites

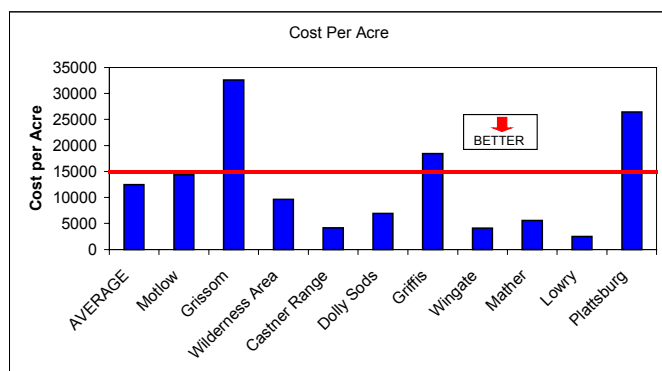


Fig. 7.5-9. Cost Per Acre for OE Removals

Fig. 7.5-10 shows the OE IPT's labor charges to overhead trend. In the fourth quarter FY95, OE was established as a directorate with its own DOH goal. The FY98 increase was due to an unexpected funding method change requiring certain work be charged to overhead. Monitoring overhead ensures fair cost distribution to customers.

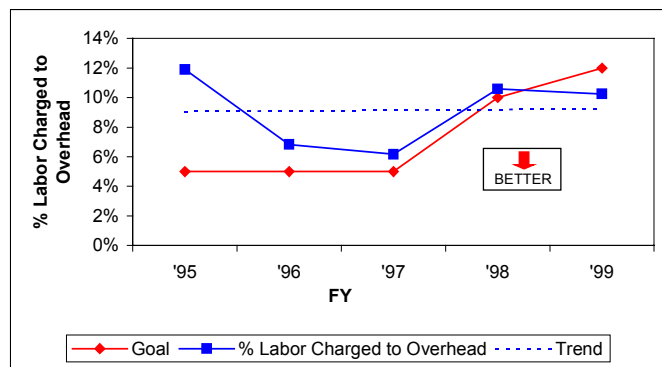


Fig. 7.5-10. OE % of Labor Charged to Overhead

Figs. 7.5-11 through 7.5-14 show the results for our P&PM process. Fig. 7.5-11 shows labor charges to overhead trend. Goal adjustment was due OE being structured as an independent team. FY97 costs are due to mandated PROMIS implementation.

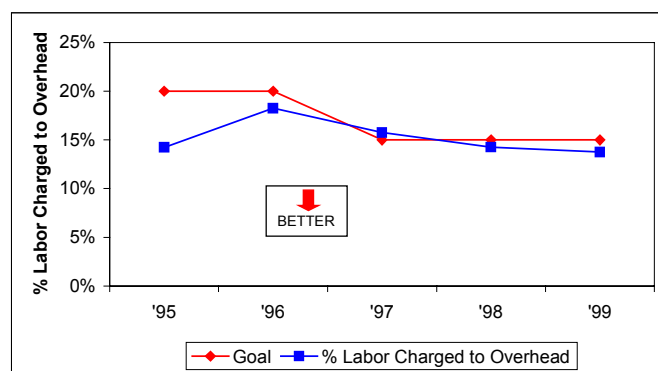


Fig. 7.5-11. P&PM's % of Labor Charged to Overhead

Fig. 7.5-12 shows the reduction in the percent of in-house labor per the total project management dollars administered by HNC. We analyze this trend for unexplained increases, which may indicate loss of productivity, rework, or other problems. We attribute the downward trend to increased process efficiency. Figs. 7.5-13 are aggregated in table 7.2-1. Fig. 7.5-13 shows the increased workload for the P&PM process as measured in expenditures per FTE.

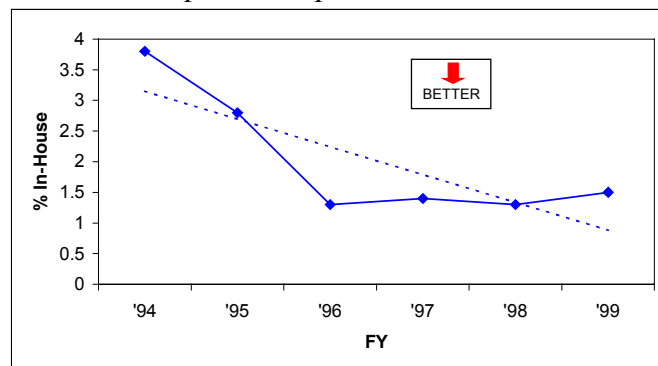


Fig. 7.5-12. In-house Labor vs. P&PM's Dollars

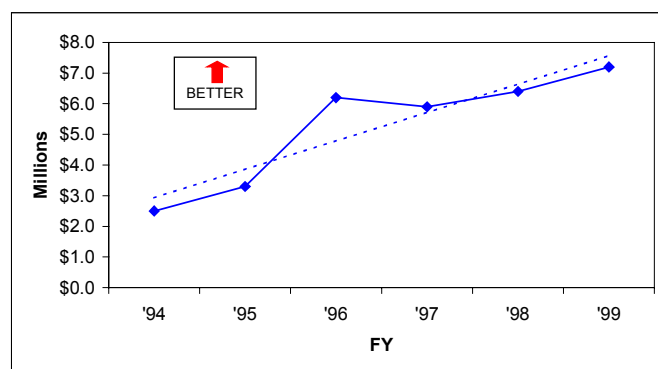


Fig. 7.5-13. P&PM's Workload per FTE

We ask our customers to evaluate our P&PM process on our external customer survey. Fig. 7.5-14 shows a significant improvement since we adopted Baldrige.

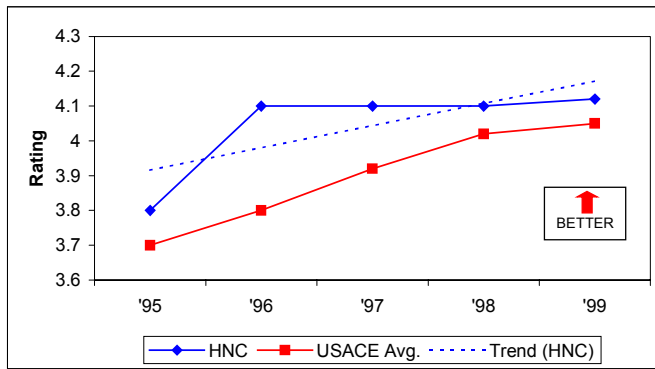


Fig. 7.5-14. P&PM's External Customer Survey Performance—Trend and Comparison

Figs. 7.5.15 through 7.5-25 are results for our engineering and technical services process. Fig. 7.5-15 shows how work plan (design) cost as a percentage of placement cost varies with the project size and how our costs compare to the USACE military program average for the same work. Because of the cost associated with the smallest projects (<\$100K), we use an even more efficient credit card process for such jobs.

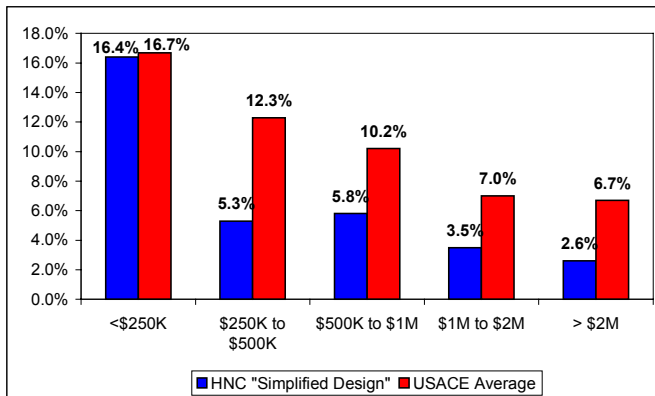


Fig. 7.5-15 Work Plan Cost Compared to USACE

Fig. 7.5-16 shows a design cost index (DCI) comparison of A-E designs. The DCI is a number calculated by dividing the actual design cost by the target design cost. That number would be 1.0 if actual cost equal the target cost. Therefore, a DCI less than 1.0 means actual costs are below the target. Most of our DCI's are below 1.0.

Fig. 7.5-17 shows that our in-house design costs are below the HQUSACE target.

Fig. 7.5-18 shows that our range design process has improved since FY94 through design standardization and increased communication with the customer.

Fig. 7.5-19 shows the engineering directorate (ED) process labor charges to overhead trend.

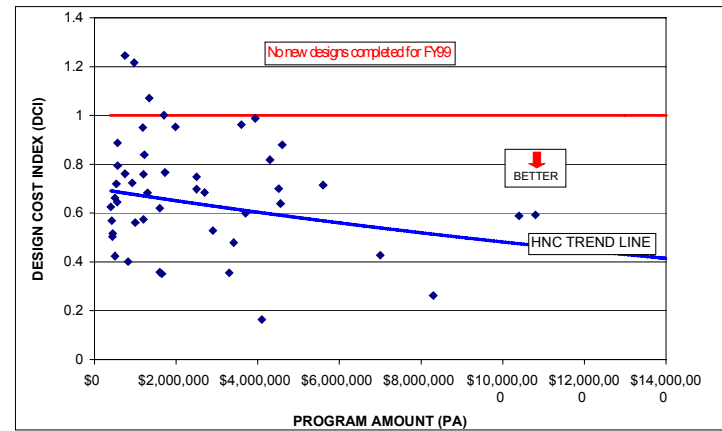


Fig. 7.5-16. Design Cost Index

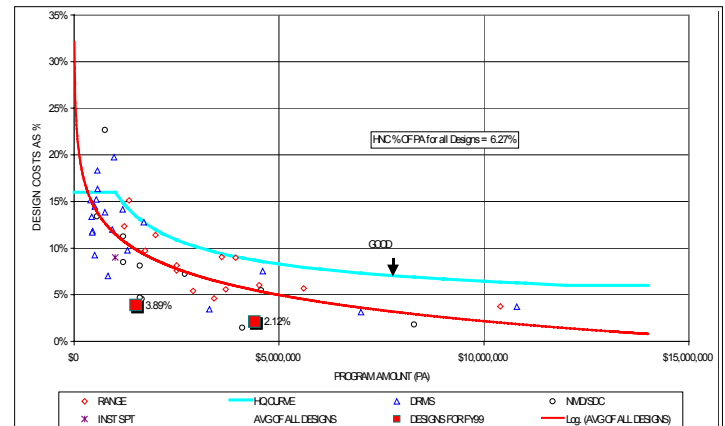


Fig. 7.5-17. Design Cost as % of PA

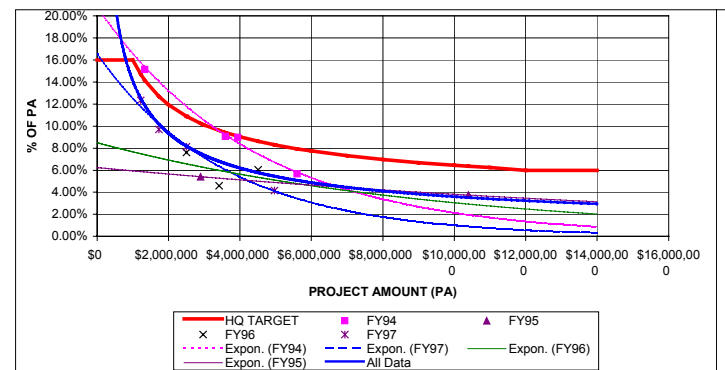


Fig. 7.5-18. Ranges Design Cost as % of PA

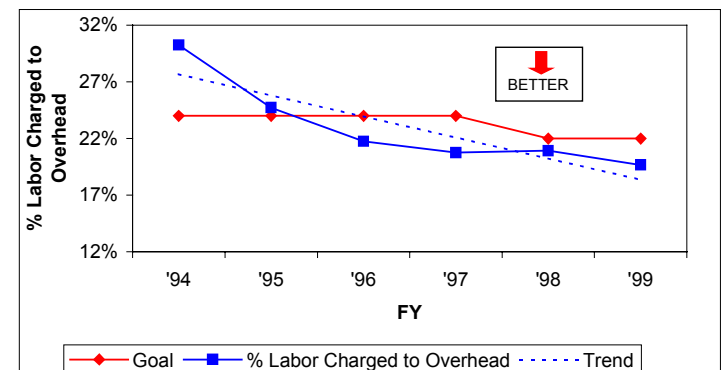


Fig. 7.5-19. ED's % of Labor Charged to Overhead

We track key process overhead monthly to ensure even work distribution over the year, which is a significant productivity factor. For example, fig. 7.5-20 shows that engineering had a more even distribution of charges to overhead in FY99 than in previous years.

Fig. 7.5-21 shows reduced in-house labor per total engineering dollars administered by HNC. We analyze this trend for unexplained increases, which may indicate loss of productivity, rework, etc. We attribute the downward trend to engineering process improvement. Fig. 7.5-22 shows the increased workload for engineering as measured in expenditures per FTE.

Figs. 7.5-21 and -22 are aggregated in table 7.2-1.

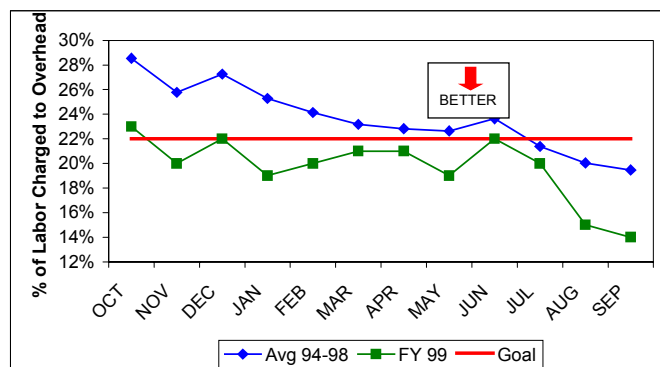


Fig. 7.5-20. Engineering's % of Labor Charged to Overhead per Month

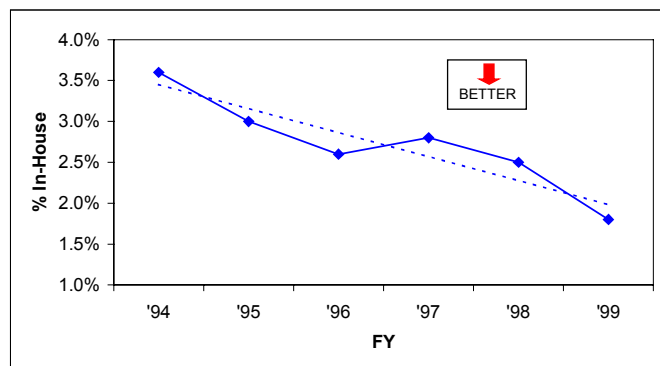


Fig. 7.5-21. Design in-house Labor vs. ED Dollars

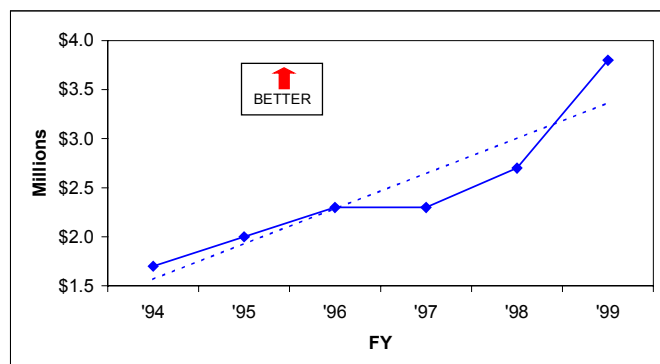


Fig. 7.5-22. Engineering Workload per FTE

Fig. 7.5-23 shows the number of internal task orders passing through our Engineering Directorate (ED). This is one way we measure work load and on-time delivery throughout the product lines. Since increases in late taskings indicate increased workload, we are currently hiring additional technical employees.

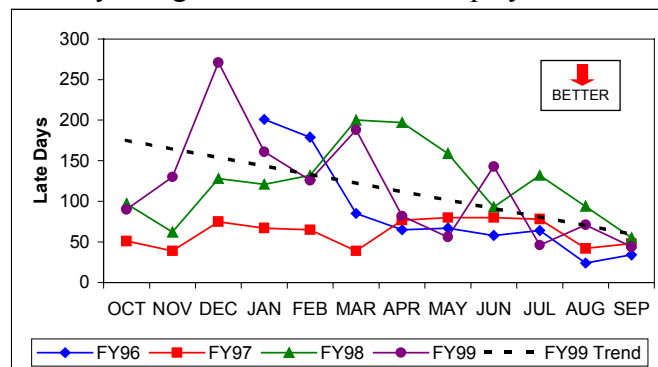


Fig. 7.5-23. Late Taskings Recorded by Month

We ask our customers to evaluate our engineering design process on our external customer survey. Fig. 7.5-24 shows significant improvement since we adopted Baldrige.

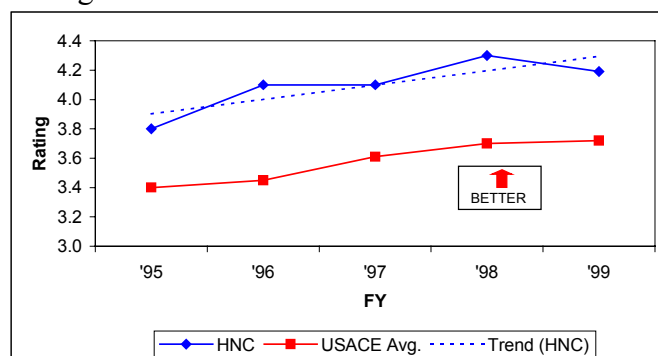


Fig. 7.5-24. Engineering Design External Customer Survey Performance

Fig. 7.5-25 shows an upward trend in value engineering (VE) savings. We evaluate Military Construction, Army (MCA) projects with costs of \$2M or more and all other acquisitions of \$1M or more for VE potential.

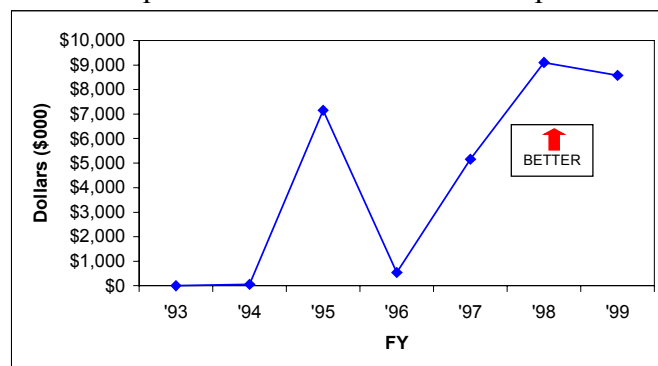


Fig. 7.5-25. Value Engineering Savings

Figs. 7.5-26 through 7.5-32 show results for our construction management process. Our only construction mission is Demilitarization, which includes the construction of Chem Demil plants in the U.S. and Russia.

Costs associated with managing the construction of Chem Demil sites include supervisory and administrative (S&A), contingency, engineering during construction (EDC), and as-builts. We control these costs to ensure there are no overruns. Also, these costs are indicators of process inefficiencies and quality problems, since increases here may indicate bottlenecks or rework. Figs. 7.5-26 and -27 show construction management costs for our Anniston and Umatilla sites.

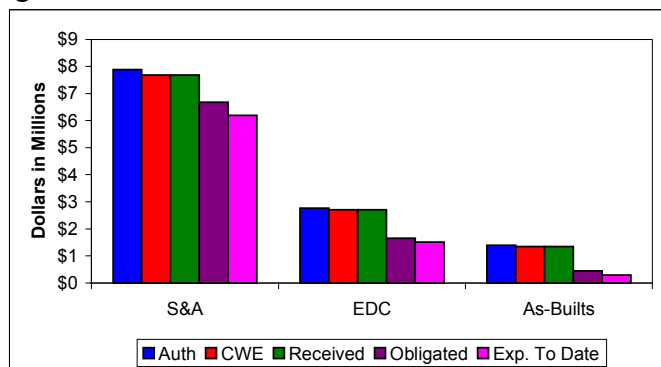


Fig. 7.5-26. Anniston Construction Mgt. Costs

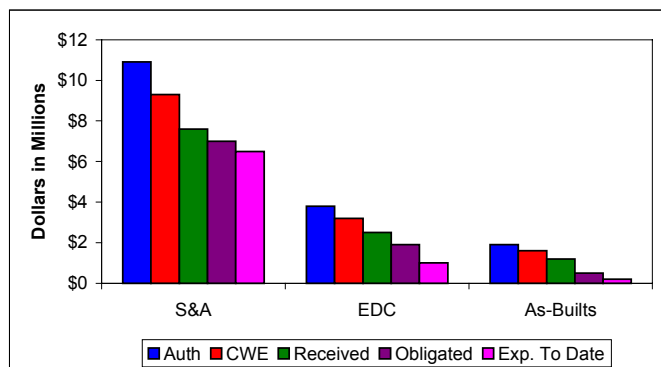


Fig. 7.5-27. Umatilla Construction Mgt. Costs

Fig. 7.5-28 depicts the expected construction S&A rates for the life of the whole Chem Demil stockpile program. The overall program is well within all targets. The high S&A charge in FY98 was due to work on changes with very little placement. That effect often occurs with each construction site startup when equipment is being purchased. The cumulative rates for construction life, however, are well below the goal.

Fig. 7.5-29 shows the request for information (RFI) response time for the Anniston Chem Demil site.

Fig. 7.5-30 shows the construction management labor charges to overhead trend.

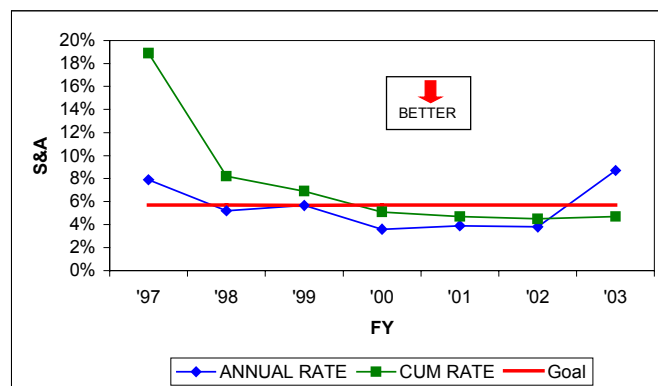


Fig. 7.5-28. Total S&A for Life of Stockpile Program

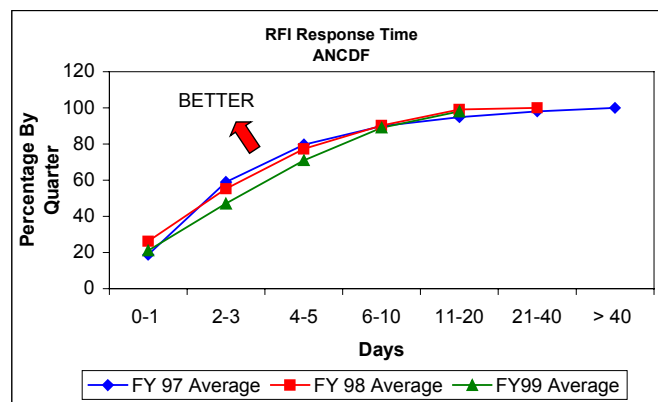


Fig. 7.5-29. Anniston RFI Response Time

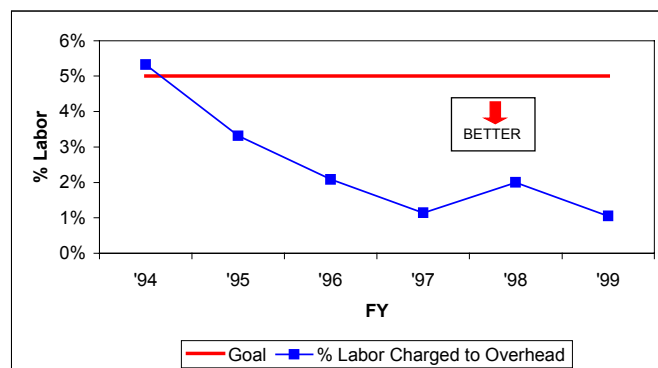


Fig. 7.5-30 Construction Management % of Labor Charged to Overhead

Fig. 7.5-31 plots HNC's construction S&A earned rate against the expensed rate. The Corps of Engineers charges a flat S&A rate of 5.7%. The plot shows that over the life of Chem Demil construction, we will manage the work for less than the flat rate. This is one of our efficiency measures for construction.

Fig. 7.5-32 shows significant improvement in the number of critical noncompliance reports on Chem Demil construction management quality audits. We attribute this positive trend to the implementation of a more systematic quality audit process.

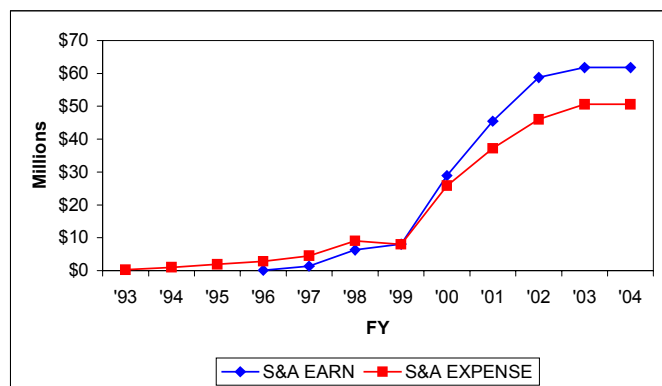


Fig. 7.5-31. Construction S&A earned vs. expensed

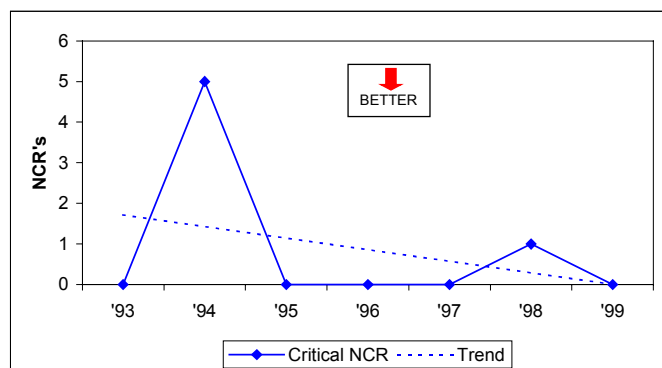


Fig. 7.5-32. Construction Mgt. Audit Trend

Figs. 7.5-33 through 7.5-39 show results for our contract management process.

Fig. 7.5-33 shows contract management labor charges to overhead. In October 1995, we established a separate departmental overhead account for our Contracting Directorate (CT). In October 1997, we eliminated the G&A account funding, resulting in expected increases in departmental overhead charges. However, this arrangement helps us control distributed costs across the whole organization and thus ensures fair distributed costs to customers. We are the only government organization that distributes contracting costs this way.

Fig. 7.5-34 shows significant reduction in the percent of in-house labor per the total contract dollars administered by HNC since adopting Baldrige. We attribute our downward trend to increasing contract management process efficiency. Figs. 7.5-34 and -35 are aggregated in table 7.2-1.

Fig. 7.5-35 shows the increased workload for the contracting management process as measured in expenditures per FTE.

Fig. 7.5-36 shows the reduction in cycle time to award a service contract. Most contracts we issue are service contracts.

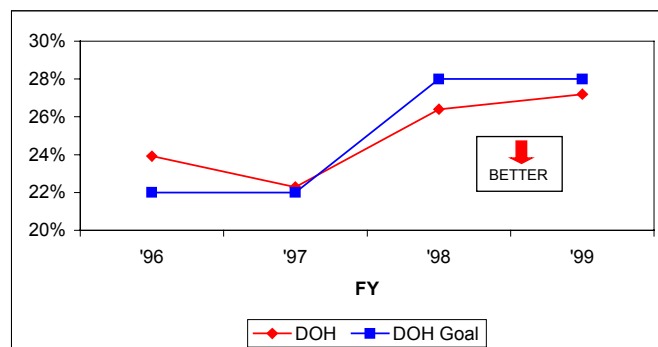


Fig. 7.5-33. Contract Management % of Labor Charges to Overhead

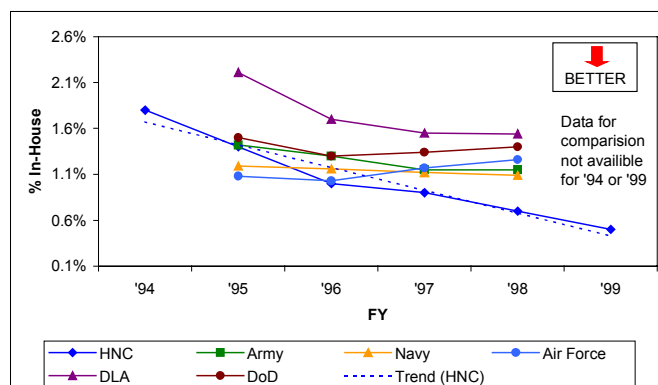


Fig. 7.5-34. Contract Management In-house Labor vs. Contract Dollars and Competitive Comparison

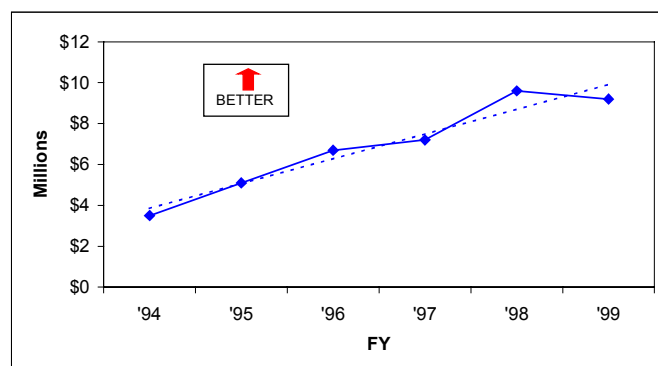


Fig. 7.5-35. Contract Management Workload per FTE

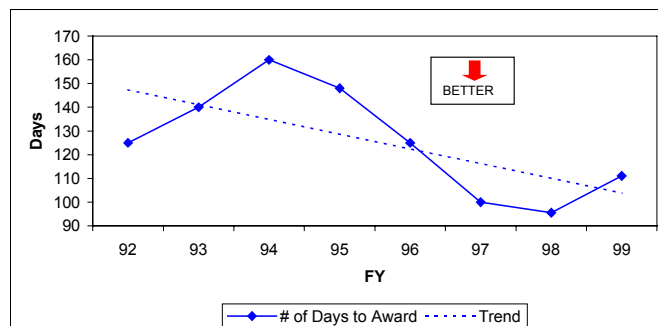


Fig. 7.5-36. Average Number of Days to Award Service Contract

Fig. 7.5-37 shows the reduction of the procurement administrative lead time (PALT) cycle time to process a delivery order (DO).

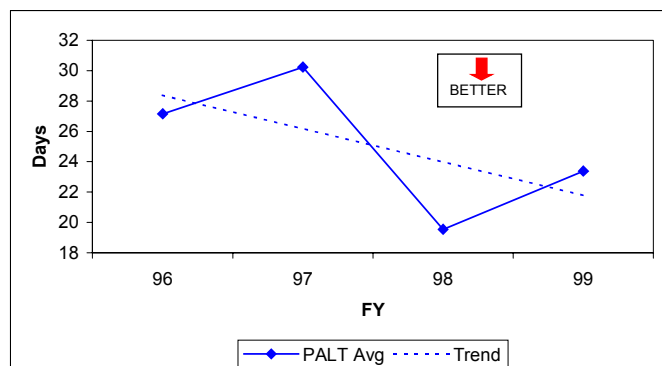


Fig. 7.5-37 Average Number of Days to Award a DO

Fig. 7.5-38 shows that we have successfully shifted the bulk of our contract awards from the third and fourth quarters to the first and second quarters. Awarding more contracts early in the year shows an efficient use of resources.

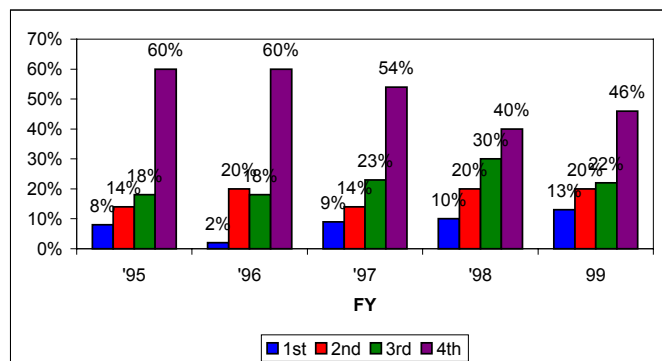


Fig. 7.5-38 Contract Award Distribution

Using credit cards instead of traditional contracting methods to purchase in-house items saves administrative costs and decreases turn-around time. Fig. 7.5-39 shows that our credit card purchases have increased since May 1995. We have exceeded our goal to buy 90% of small purchases by credit card.

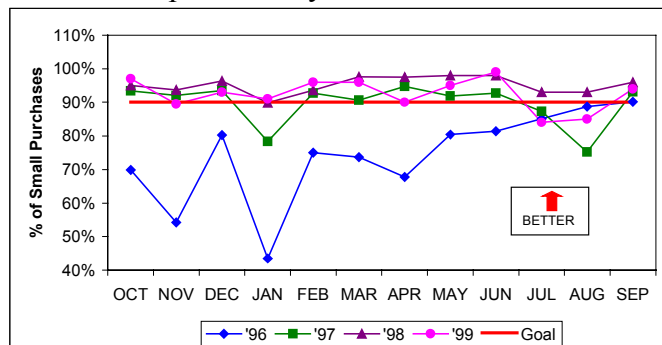


Fig. 7.5-39 Credit Card Purchases

Table 7.5-1 shows that outside awards increased since implementing our team structure. We consider outside awards a measure of innovation and process quality.

Table 7.5-1. Huntsville Center External Awards

Year	Title
1995	<ul style="list-style-type: none"> •ACOE Finalist •Federal Energy and Water Management Award •HQUSACE Extra Special Programs citation for our ASG
1996	<ul style="list-style-type: none"> •ACOE Finalist
1997	<ul style="list-style-type: none"> •ACOE Finalist •Federal Energy and Water Management Award •E. Manning Seltzer Award for service excellence and significant contributions to USACE legal services •Best Small Army Audit Office •Hammer Award—Energy O&M Program •USACE Architect of the Year Award
1998	<ul style="list-style-type: none"> •ACOE Chief of Staff Winner •PQA Achievement Award •DOD Certificate of Recognition for Acquisition Innovation •E. Manning Seltzer Award for service excellence and significant contributions to USACE legal services •Best Small Army Audit Office •ASCE Government Civil Engineer of the Year •Hammer Award—Energy O&M work
1999	<ul style="list-style-type: none"> •Alabama Quality Award for Service Sector •ACOE Chief of Staff Winner •PQA Merit Award •DOD Productivity Excellence Award •Undersecretary of Defense Financial Management Award •Herbert A. Kassner Print Journalism Award, Second Place •E. Manning Seltzer Award for service excellence and significant contributions to USACE legal services •Best Small Army Audit Office •Spirit of Arrowhead Award for Significant Contributions in Corps-wide Legal Management •USACE Engineer of the Year •SAME Engineer of the Year—local chapter

Fig. 7.5-40 shows TLM trends for all key processes. We are the only Corps organization that assigns TLM's to Contracting (CT), which helps control in-house costs. The reason for CT's increase is because of changes explained with fig. 7.5-33.

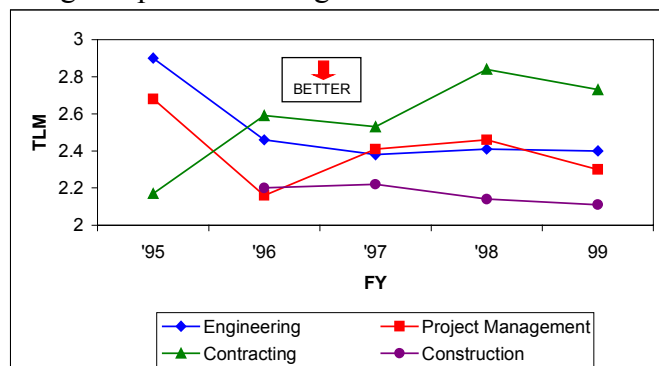


Fig. 7.5-40 TLM By Key Process

Table 7.5-2 and fig. 7.5-41 show cost avoidance through process improvements.

Table 7.5-2. Cost Avoidance Totals for All Areas

Year	Amount Saved (\$M)
1994	34.2
1995	24.3
1996	41.9
1997	24.7
1998	32.1
1999	29.5
Total	186.7

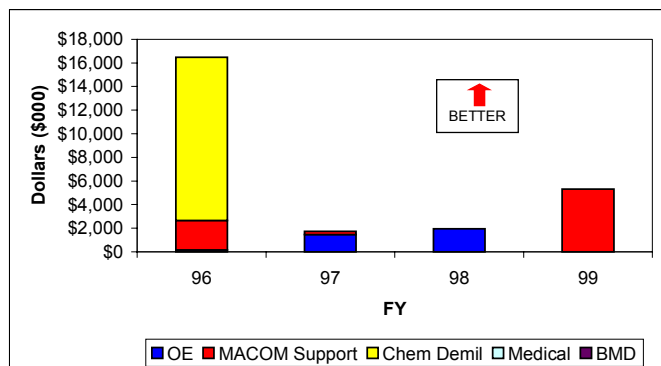


Fig. 7.5-41. Cost Avoidance for Product Lines

Figs. 7.5-42 through 7.5-47 and tables 7.5-3 and 7.5-4 show key support process results.

Fig. 7.5-42 shows results from our FY97, FY98, and FY99 internal customer survey key support process element. We use surveys as an overall measure of key support process quality. Results are used to improve internal communication and services.

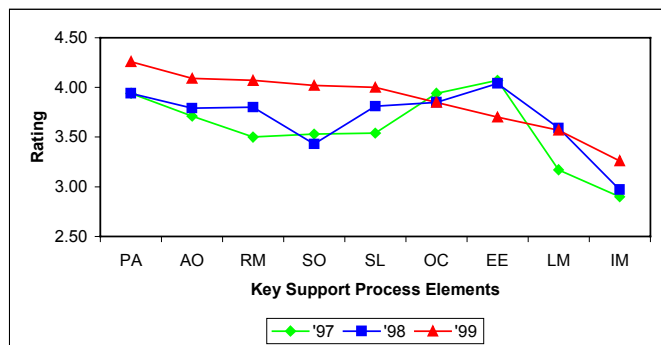


Fig. 7.5-42. Key Support Process Breakdown of Internal Customer Survey Trend

Table 7.5-3 summarizes key support process elements, principal requirements, and key measurement references. Support processes relate to key processes as shown in fig. 6.1-3.

Table 7.5-3. Key Support Process Summary

Key Support Process	Process Elements	Principal Requirement	Performance References
Regulatory & Legal Compliance	OC, AO, SO, EEO, RM-M, SL, PAO	Ensure that we play by the rules and protect public safety.	fig. 7.5-42 fig. 7.5-44 fig. 7.5-48 fig. 7.5-50 table 7.2-1 table 7.5-4 table 7.5-5
Facilities & Equipment Management	LM Directorate	Ensure smooth day-to-day operation of facilities.	fig. 7.5-42 fig. 7.5-45 table 7.2-1 table 7.5-4
Communications & Information Management	IM Directorate	Ensure smooth day-to-day operation of automated systems.	fig. 7.5-42 fig. 7.5-46 fig. 7.5-47 table 7.2-1 table 7.5-4
Resource Management	RM Directorate	Ensure fiscal integrity. Calculate accurate manpower requirements.	fig. 7.5-42 fig. 7.5-43 table 7.2-1 table 7.5-4

As table 7.2-1 shows, we carefully control our G&A overhead costs to ensure fair and accurate rates. One important way we ensure that G&A goals are met (fig. 7.2-8) and that our corporate budget estimate is accurate is by operating our key support processes within budget, since they are funded mostly through overhead. Table 7.5-4 shows the support process budget vs. actual performance trend through 3rd quarter FY99.

Table 7.5-4. Key Support Process Elements Budget vs. Actual

Support Process	FY96		FY97		FY98		FY99	
	Bud	Act	Bud	Act	Bud	Act	Bud	Act
RM	2.9	2.8	2.7	2.9	2.8	2.9	3.0	3.1
IM	2.5	2.8	2.3	2.3	2.2	2.1	2.1	2.1
XO	.5	.5	.8	.8	.7	.7	.8	.8
PA	.3	.3	.4	.3	.4	.3	.4	.3
OC	.5	.5	.5	.5	.6	.6	.7	.7
AO	.3	.2	.3	.3	.3	.3	.2	.2
LM	.7	.7	.8	.7	.8	.7	.7	.6
SL	.3	.3	.3	.3	.3	.2	.3	.3

Fig. 7.5-43 shows the timeliness and quality of the RM cost transfer process. The process is 100% on time with a positive accuracy trend.

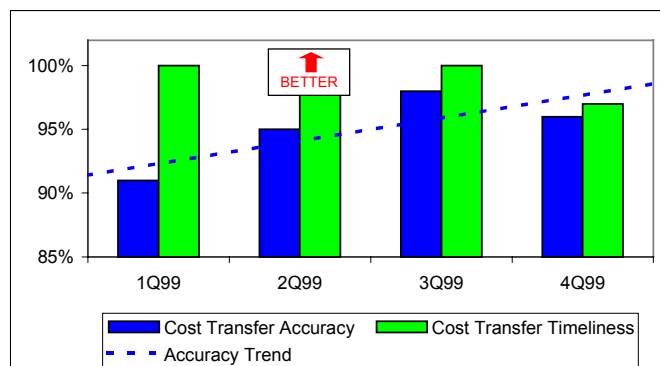


Fig. 7.5-43. RM Process Timelines and Accuracy Rate

Fig. 7.5-44 shows improvement in audit completion rates. To increase that average, AO restructured the scopes of audits and streamlined work processes. As a result, the average audit reports issued from FY94-98 increased to 18 per year. The monetary benefits resulting from audits over the last five years have totaled over \$10 million. Because of AO's efficient work, the office has been recognized for the last three years as the Best Small Audit Office in the Army.

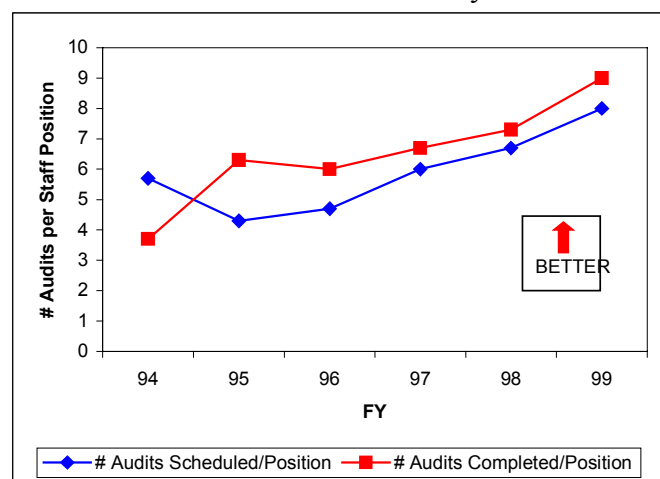


Fig. 7.5-44. Increase in Audits Performed by Audit Office Due to Process Streamlining

Fig. 7.5-45 shows the time it takes to process travel orders and vouchers. The goal is three days. This is a key logistics management measure, since our travel requirements are significant.

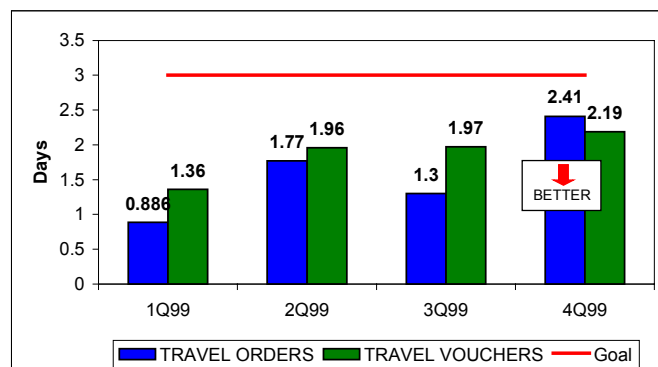


Fig. 7.5-45. Time to Process Travel Orders and Vouchers

Fig. 7.5-46 shows the amount of uptime for network, e-mail, and web services operations. Fig. 7.5-47 shows an improved trend in the average time to complete a help desk request. These are key information management measures.

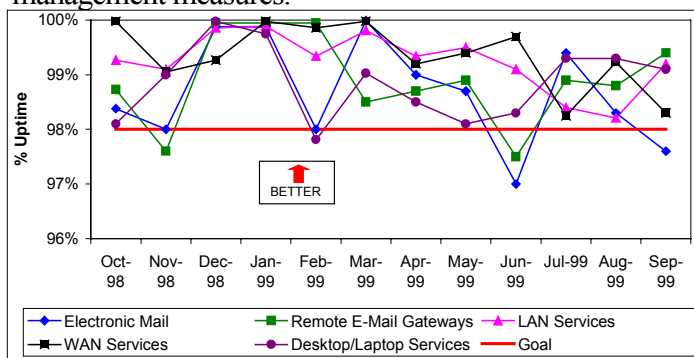


Fig. 7.5-46. % Uptime for Information Management Network, E-Mail, and Web Services

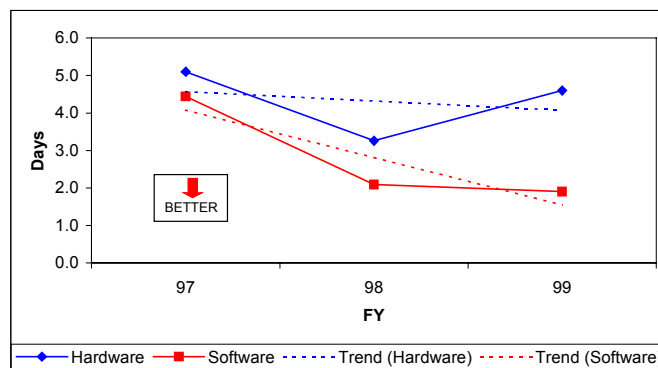


Fig. 7.5-47. Information Management Cycle Time to Complete HelpDesk Request

7.5a(2) Regulatory/legal compliance and citizenship

These are data results from the process outlined in fig. 1.2-1.

Table 7.5-5 shows that since FY94 our Audit Office has made 242 audit recommendations to improve management processes and ensure that we meet regu-

latory and legal requirements. All but three have been closed. Fig. 7.5-32 above is also a measure of regulatory and legal requirements for our construction management process.

Table 7.5-5. Audit Recommendation Resolution

Recommendation Year	Recommendations	Resolved
FY94	79	79
FY95	57	57
FY96	24	24
FY97	37	37
FY98	45	45
FY99	25	22

Fig. 7.5-48 shows the ability of our Office of Counsel to review a contract action within three working days. This process is key to our fulfilling our guiding principle “Play By the Rules” (fig. 1.1-2).

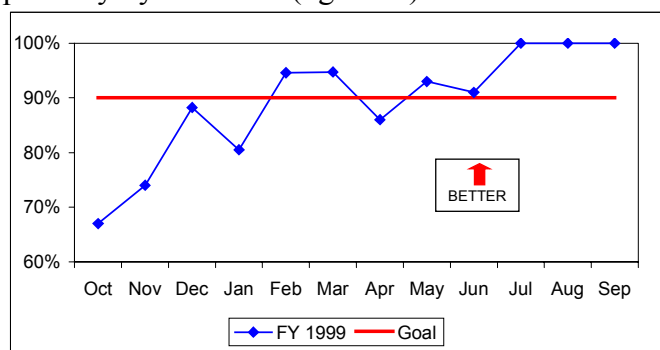


Fig. 7.5-48. Contract Action Review

Fig. 7.5-49 shows an upward trend in media contacts, a measure of keeping the public informed, which is especially critical to our OE and Chem Demil Programs.

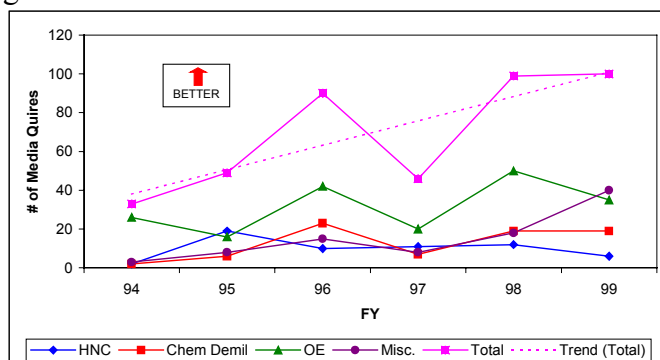


Fig. 7.5-49. Media Contacts

Fig. 7.5-50 shows the material weakness reported in our annual assurance statement through our management control process (MCP). We use this to ensure that we are complying with laws and regulations.

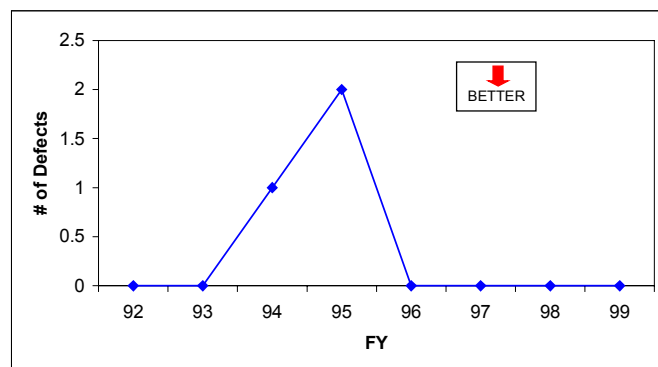


Fig. 7.5-50. Material Weaknesses

Fig. 7.5-51 shows our trend for contributions to the Combined Federal Campaign. We have met our goals every year except one. Our per capita for each employee has grown from \$62 in FY90 to \$121 in FY99.

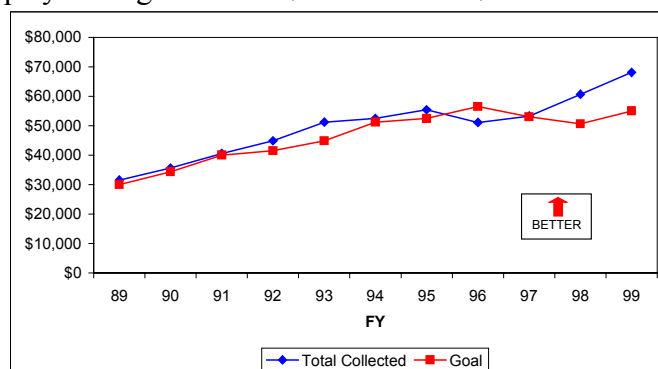


Fig. 7.5-51. Combined Federal Campaign Trend

Table 1.2-1 lists all of our other community involvement activity results.

Table 7.2-1 is the corporate aggregate of the implementation and effectiveness of our organizational strategy. Table 4.1-1 “Key Success Factors” correlates the breakdown of our organizational strategy implementation and effectiveness with the HNC dashboard. Table 2.2-3 correlates projections for product line strategic performance. Table 3.1-3 shows increased work resulting from improved product and service features.